NOV 9 1934

The OIL AND GAS JOURNAL

40

DUCING

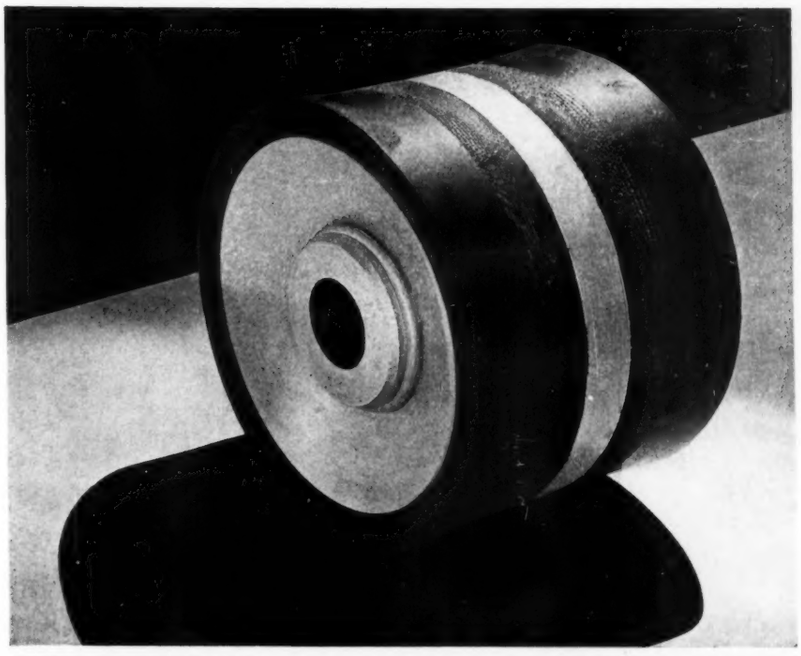
FINING

TURAL
SOLINE

PELINE

RKETING

Mission
OIL FIELD
PRODUCTS



MISSION ★ PISTONS

MISSION SLIPS and MISSION VALVES
have long been the STANDARD of
COMPARISON the WORLD OVER

We are now proud of the fact that the New and Improved Mission Piston can take a position parallel in excellence with these other Mission Products.

Made in line with our policy . . . . "If a product designed by Mission is not proven superior, Mission will not produce it."

MISSION
MANUFACTURING CO.

2416 RAILROAD ST. HOUSTON, TEXAS

CALIFORNIA DISTRIBUTORS: SECURITY ENGINEERING CO.

TULSA, OKLAHOMA NOVEMBER 8, 1934

When the Oil Fields Need

STEEL-RYERSON

Ships Immediately—from Stock

For many years Ryerson Steel-Service has carried a wide range of steel, copper, brass and allied products used by the oil industry. Our men have come to know the particular problems and the steels best suited for the hundred and one oil industry applications. They are able to make suggestions and give help in planning which often results in direct economies and gives added life and satisfaction in the applications.

Whether you need Ryerson Steel for new construction, equipment modification, current maintenance or emergency break down, phone, wire or mail your order to the nearest Ryerson plant. Quick, personal service is assured.

The Ryerson Stock List is your guide to steel that is ready for Immediate Shipment. If you do not have a copy, we will be glad to mail one to you.

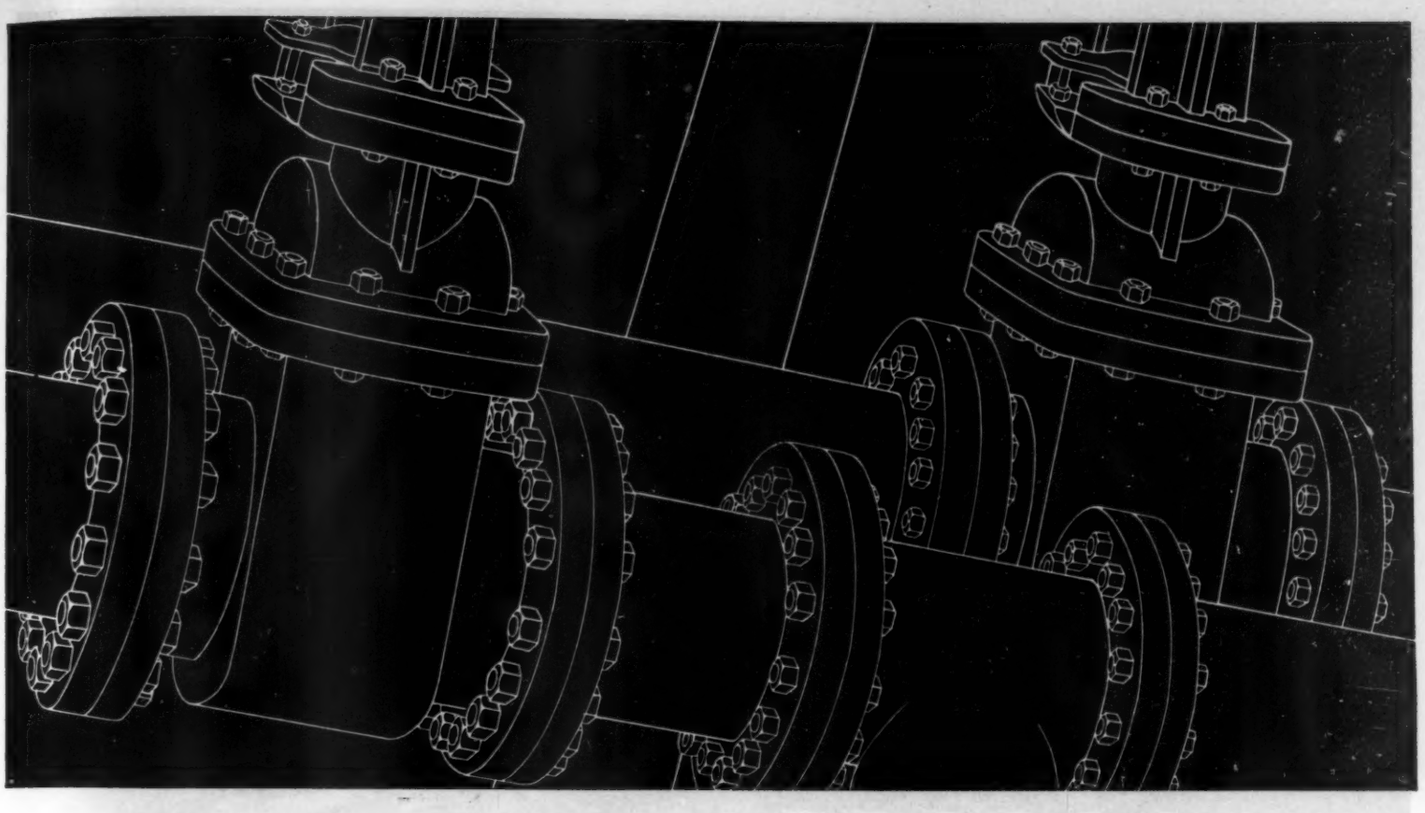
Ryerson Steel-Service to the Oil Industry Includes:

LIGHTWEIGHT I-BEAMS, for walking beams, sampson posts, etc.
STRUCTURAL I-BEAMS, for derrick base and floor construction.
PLATES AND SHEETS, for tank construction and repair; corrugated for roofing, siding and building construction.
FLOOR PLATES AND STAIR TREADS, for walkways, around tanks and refineries.
STAINLESS AND HEAT RESISTING STEELS, for refinery still tubes, valves, etc.
STAINLESS STEEL CASTINGS and pipe fittings for heat and acid resistance.
SHAFTING, for every moving part.
BABBITT METAL AND BEARINGS, for bearing replacements.
BARS OF ALL KINDS, for manufacture and repair of equipment.
ALLOY STEELS, special steels particularly adapted to specific uses. Bars, plates, sheets, etc.
TOOL STEELS, for all purposes.
WELDING ROD, both acetylene and electric for the full welding field.
CONCRETE REINFORCING BARS, and allied building materials.
MACHINE BOLTS, NUTS, WASHERS, RIVETS, TURNBUCKLES, ETC. in all sizes.
BOILER TUBES AND FITTINGS, BRASS, COPPER, ZINC, WIRE, CHAIN HOISTS, MACHINE TOOLS, ETC.

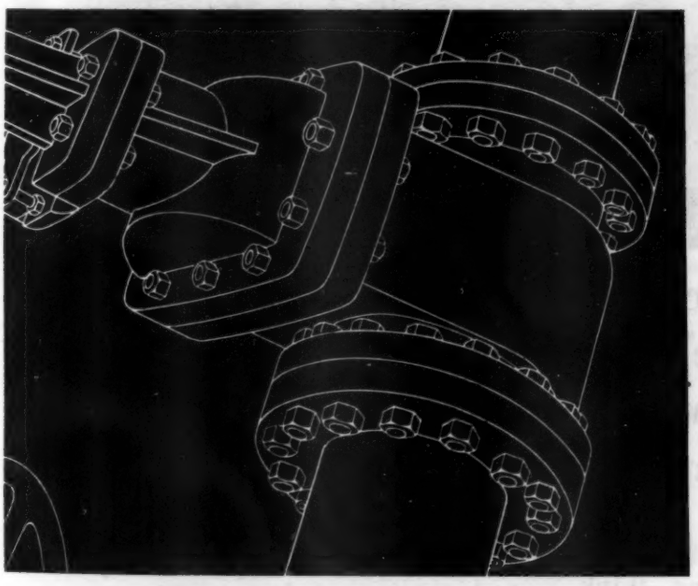
JOSEPH T. RYERSON & SON, INC.

Steel-Service Plants at:

Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City



57% Less Distortion with Bethlehem Oil-Quenched Nuts



ENGINEERS of a Midwestern company, with a large volume of business in the oil fields, recently selected Bethlehem Oil-Quenched Nuts for use with alloy studs on high-temperature equipment. The results of exhaustive tests, on every available type of fastening, led to this decision.

"The medium-carbon, heat-treated, oil-quenched nuts, as made by Bethlehem Steel Company, distorted approximately 57 per cent less—" (than the next best nuts), they reported, as one of the deciding considerations.

Each Bethlehem Oil-Quenched Nut had been fitted on a 1-in. dia. alloy stud and subjected for 12 days to a temperature of 1000 deg. F., at bolt loads equivalent to approximately 60,000 lbs. per sq. in. stress.

"In view of the good results obtained with these nuts and their moderate cost," the report continued, "we would recommend their use on alloy-steel bolting."

* * *

Bethlehem Oil-Quenched Nuts meet every combination of pressures and temperatures when used on studs or bolts of Supertemp, Mayari or S. A. E. 4140, Bethlehem's group of alloy steels for high temperatures. For long, dependable service, write these Bethlehem alloys into your next specifications for high-temperature fastenings.

BETHLEHEM STEEL COMPANY
GENERAL OFFICES: BETHLEHEM, PA.

District Offices: Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Indianapolis, Kansas City, Milwaukee, New York, Philadelphia, Pittsburgh, St. Louis, St. Paul, Washington, Wilkes-Barre, York. *Pacific Coast Distributor:* Pacific Coast Steel Corporation, San Francisco, Seattle, Los Angeles, Portland, Honolulu. *Export Distributor:* Bethlehem Steel Export Corporation, New York.

BETHLEHEM STEEL

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription prices: Domestic, $6.00 a year; foreign, $7.00 a year. Current copies (except special numbers), 15 cents each. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Okla., under the Act of March 3, 1879.

Thermoid products are engineered with the same spirit of achievement that has built the nation's great refineries.

Drilling, pumping, piping, storing—think of the coordination of effort behind every daily output of the country's great refineries! And it is a coordination of many kinds of knowledge that has made THERMOID synonymous with QUALITY as a label on oil industry products.

To Thermoid, a complete familiarity with conditions in the field is a prime essential. How is this belting, this hose, this brake lining or packing to be used? What are the conditions of service? Only with such first-hand knowledge can every Thermoid product be engineered and manufactured for the particular job for which it is intended.

With this breadth of background, every product marked Thermoid is built to provide you with the kind of enduring performance you want. *Buy by that quality mark!*

Thermoid MECHANICAL RUBBER GOODS
IT'S FROM OILWELL

OIL WELL SUPPLY CO.

Branch Stores in all Oil Fields . . . Distributors of

Thermoid

PRODUCTS FOR THE OIL INDUSTRY

Including Oil Pumping and Oil Drilling Belt—Rotary Hose—Air, Steam, Welding and Refinery Hose—Packings and Brake Lining

PUTTING THE BRAKES ON RUST...

Nothing protects metal like Red-Lead and "Saucer Test" proves it

ARE YOU one of those responsible for the care of iron and steel structures? Are you connected with a steamship company, a railroad, an oil or gas company, a highway department or any other organization with large areas of metal to be kept in A-1 condition?

It is for men in your position that we have developed the "Saucer Test", a simple, practical way to demonstrate which paint gives metal structures the most durable and economical protection.

The "Saucer Test" Kit comes to you free . . . just send coupon below. Includes metal saucer and sample of Dutch Boy Red-Lead to test against any other paint you wish. Choose your own conditions. Test under sun, heat, cold, moisture, smoke, fumes, salt air, water.

In a long series of tests conducted by a leading southern railroad, the "Saucer Test" proved that pure red-lead outlasted other paints tested as a primer by 4 to 1.

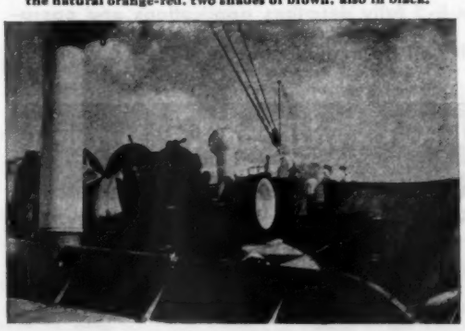
But don't take our word for it or the word of others. Put red-lead *on the spot* yourself. Send for the KIT and see the evidence with your own two eyes . . . how pure red-lead gives long-life protection and saves money.

Save the surface and you save all—Avoid rust

NATIONAL LEAD COMPANY

111 Broadway, New York; 116 Oak St., Buffalo; 900 W. 18th St., Chicago; 659 Freeman Ave., Cincinnati; 820 W. Superior Ave., Cleveland; 722 Chestnut St., St. Louis; 2240 24th St., San Francisco; National-Boston Lead Co., 800 Albany St., Boston; National Lead & Oil Co. of Pa., 316 4th Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Bldg., Philadelphia.

Dutch Boy Red-Lead is a highly oxidized red-lead supplied in two forms — paste and liquid. The paste comes in natural orange-red, is readily mixed to brushing consistency, can be tinted to darker colors. Dutch Boy Liquid Red-Lead (ready for the brush) comes in the natural orange-red, two shades of brown, also in black.



DUTCH BOY RED-LEAD

NATIONAL LEAD COMPANY
Please send *free* kit for making the "Saucer Test"
OGJ-11-8-34

*Individual's Name and Title*_____

*Firm Name*_____

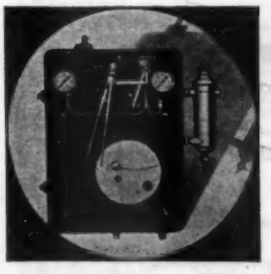
*Street*_____

*City*_____ *State*_____

[LITHARGE of correct physical character and extreme chemical purity is a necessity in oil-refining. Such litharge is made by the makers of Dutch Boy Red-Lead and Dutch Boy White-Lead. You can always rely on its unvarying uniformity. Our nearest warehouse can give you quick shipment.]

TYPICAL APPLICATIONS: MAINTAINING THE RATE OF FLOW OF GASES OR LIQUIDS AT A DEFINITE VALUE . . . CONTROLLING THE RATE OF FLOW OF LIQUID OR GAS IN ONE LINE PROPORTIONAL WITH THE RATE OF FLOW IN ANOTHER LINE . . . AND FOR A WIDE RANGE OF PURPOSES SUCH AS CONTROL OF LIQUIDS IN TOWERS AND STILLS.

● Simplicity is the first principle of effective low cost. This little pilot valve vastly simplifies rate-volume control and liquid level control. Definite operating economies are gained. Ruggedness is vastly increased. Many of the usual adjustments are rendered obsolete; for instance: Capacity tanks . . . Outlet throttle valves . . . Adjustable leaks. One simple micrometer screw increases or decreases the rate of flow. All adjustments are made without removing the chart or the chart dial. Engineering bulletin E-5 fully describes applications and operation. It will be mailed you on request.



AMERICAN METER COMPANY
INCORPORATED
Measurement and control of Gas, Oil, Steam, Air and Liquid

METRIC METAL WORKS · ERIE, PA.

Albany Baltimore Birmingham Boston Chicago Denver Erie Kansas City
Los Angeles Philadelphia Pittsburgh New York San Francisco
WESTSCOTT & GREIS, INC., Dallas, Tulsa CANADIAN METER CO. LTD., Hamilton, Ontario

218

THE OIL AND GAS JOURNAL

Volume 33
Number 25

November 8, 1934

SUBSCRIPTION RATES: Domestic, 1 year, $6; 6 months, $3. Canadian and foreign, 1 year, $7; 6 months, $3.50. All subscriptions payable in advance. When extra copies of special issues are available they are reserved for subscribers' needs and may be bought by subscribers at 50 cents each

SPECIAL ARTICLES

Summary of Situation ---- 7
By ANDREW M. ROWLEY

Ickes Promises Live Talk ---- 8
By HUGH D. MALLON

East Texas Hopeful ---- 8
By L. E. BREDBERG

Cartoon ---- 9

Mud Conditioning on Gulf Coast ---- 10
By NEIL WILLIAMS

World Production and Consumption ---- 11
By V. R. GARFIAS and R. V. WHETSEL

Standardizing Pipe Line Valves ---- 11

Repressuring at Tidioute ---- 12
By R. C. CONINE

Administrator's Report on Stocks ---- 12

Natural Gasoline Research Program ---- 13
By W. T. ZIEGENHAIN

Mid-Continent Runs Decrease ---- 16
By GEORGE WEBER

Still to Be Shown (Editorial) ---- 20

Price Cutting Margins (Editorial) ---- 20

News From Foreign Lands ---- 22

Manchukuo and Japan Markets ---- 37
By C. O. WILLSON

Russian Equipment Prospect ---- 37

Applied Design of Pipe Lines ---- 38
By FRANK R. YOUNG

Houston Production Chapter ---- 42

Independent Favors Exchange ---- 43
By C. J. WRIGHTSMAN

Family Drilling Crew ---- 48

Field Problems From Readers ---- 71
Edited by T. F. SMILEY

FIELD OPERATIONS

Late Fields ---- 31

West and North Texas ---- 44
By L. E. BREDBERG

East Texas ---- 45
By L. E. BREDBERG

Michigan ---- 48
By PAUL A. ELLIOTT

Gulf Coast ---- 49-50
By F. L. SINGLETON

Oklahoma ---- 52
By JAMES McINTYRE

N. Louisiana-Arkansas, Mississippi ---- 55
By J. R. CRUMPTON

Eastern Fields ---- 56
By SPECIAL CORRESPONDENT

Central West ---- 56
By GEORGE A. WHITNEY

California ---- 57
By L. P. STOCKMAN

Kansas ---- 59
By JAMES McINTYRE

Southwest Texas ---- 60

Rocky Mountain Area ---- 63
By TOLBERT R. INGRAM

Canada ---- 64
By VICTOR LAURISTON

REFINING AND MARKETING

Group 3 Market ---- 24
By T. F. SMILEY

New York Market ---- 25
By C. O. WILLSON

A.P.I. Refinery Report ---- 25

Refining and Crude Prices ---- 26-27

Tank Wagon Markets ---- 28

News for Sales Departments ---- 29

News for Petroleum Refiners ---- 32

Chicago Market ---- 34

Natural Gasoline Manufacture ---- 35

Technical Questions Answered ---- 67
By C. K. FRANCIS, Ph.D.

GENERAL DEPARTMENTS

Do You Remember? ---- 68

Personal Paragraphs ---- 68-69

Natural Gas Developments ---- 70

Record of Oil Securities ---- 72

New Equipment ---- 76-77

Classified Advertising ---- 79

Index to Advertisers ---- 80

Refinery Section Starts on Page 24

OIL MAN'S CALENDAR

November

8-9—Los Angeles, Calif., American Association of Petroleum Geologists, Pacific Section, Mayfair Hotel.

12-15—Dallas, Tex., annual meeting, American Petroleum Institute.

15-17—Pittsburgh, Pa., American Institute of Chemical Engineers.

22-23—Tulsa, fourth annual National Road Oil Congress.

December

7-8—Fort Worth, Tex., fifth annual meeting, Independent Petroleum Association of America.

19-21—Omaha, Neb., Nebraska Petroleum Marketers, Inc.

January

7—New York, Society of Automotive Engineers, annual dinner.

8-10—Milwaukee, Wis., annual convention and Equipment Show of Wisconsin Petroleum Association, Parkinson Hotel.

17-18—Minneapolis, Minn., Northwest Petroleum Association, Minnesota division, West Hotel.

March

21-23—Wichita, Kans., American Association of Petroleum Geologists, annual meeting.

April

8-13—Houston, Tex., Oil Equipment and Engineering Exposition.

Branch Editorial Offices

WASHINGTON	CHICAGO	DENVER	FORT WORTH	HOUSTON	LOS ANGELES	PITTSBURGH
Hugh D. Mallon	616 S. Michigan Ave.	Tolbert R. Ingram	L. E. Bredberg	Neil Williams	L. P. Stockman	P. O. Box 1345
808 Investment Bldg.		State Office Bldg.	Petroleum Bldg.	809-10 Sterling Bldg.	Union Oil Bldg.	

MUSKEGON	SHREVEPORT	TOLEDO	NEW YORK	OIL CITY	CHATHAM, ONT.
Paul A. Elliott	J. R. Crumpton	George A. Whitney	C. O. Willson	R. C. Conine	Victor Lauriston
Chronicle Bldg.	540 Ricou Brewster Bldg.	Box 98, Main P.O.	415 Lexington Ave.	Oil City Derrick	35 Stanley Ave.

Branch Advertising Offices

NEW YORK	CLEVELAND	CHICAGO	LOS ANGELES	HOUSTON
C. L. Cain	Howard Markt	C. R. Farmer	J. H. Tinkham	Paul T. Putnam
415 Lexington Ave.	802 Leader Bldg.	616 S. Michigan Ave.	2941 Raymond Ave.	809-10 Sterling Bldg.

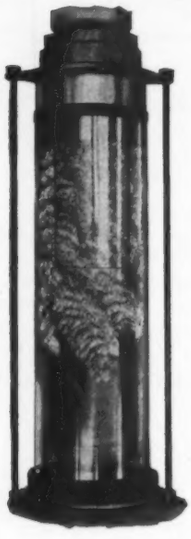
Copyright, 1934, by The Petroleum Publishing Co.

PUT YOUR CEMENT

ALL THE WAY AROUND

THE CASING . . .

by whirling it through side ports that will insure a complete distribution of the cement, and will eliminate "channeling."



The side ports cause the cement to whirl around the casing and thus completely enclose it, without danger from channeling. Free passage is assured whether the shoe rests on bottom, leans against the side, or hangs free.

It Guides . . It Floats . . and It Puts the Cement Where It Should Go.

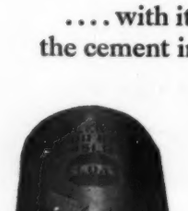
THE BAKER CEMENT WHIRLER SHOE

performs three distinct functions . . .

. . . . with its round nose, made of Baker Formula Concrete, it will safely GUIDE in any string of casing;

. . . . with its buoyant bakelite valve ball, double sealing against rubber recessed in its bakelite valve cage, it will FLOAT the longest, heaviest string of casing safely down the hole; and

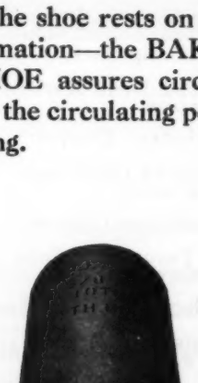
. . . . with its side openings, slanting upward and baffled to direct the cement in a spiral motion, it whirls the slurry completely and uniformly around the casing. The whirling ports are in addition to the bottom circulating hole.



It makes no difference if the shoe rests on bottom, or leans against the formation—the BAKER CEMENT WHIRLER SHOE assures circulation and distribution through the circulating ports, and upward around the casing.

THE BAKER CEMENT BAFFLE COLLAR

With Hole—has an internal construction of Baker Formula Concrete to provide ease in drilling up. It provides means for stopping the cementing plugs above bottom, without in any manner interfering with the passage of the cement. The Baffle Collar is usually placed one or two joints above the bottom, and is particularly adaptable to special cementing jobs.



NRA

BAKER OIL TOOLS, INC.

SEE OUR DESCRIPTIONS IN THE COMPOSITE CATALOG

P. O. BOX 609, HUNTINGTON PARK, CALIFORNIA

COALINGA ▲ TAFT ▲ HOUSTON ▲ OKLAHOMA CITY ▲ TULSA ▲ NEW YORK CITY

Crude Oil Production Registers Large Decrease as Price Structures Show Greater Strength

By ANDREW M. ROWLEY

ONE of the largest declines in crude oil production registered in a long time was recorded last week, due chiefly to a drop of about 99,000 barrels daily in the output in East Texas where activities of the Federal Tender Board and lack of storage facilities cramped the style of the "hot" oil operators. As a result production for the United States was 31,000 barrels daily below Federal allowables for October and 46,000 barrels daily below the higher November allowables. Oklahoma was considerably below its allowable and the decrease in California brought that state under its permitted quota. Even Texas was within striking distance of the figure set for it.

The gasoline market continued to gain strength with predictions being made still better prices will prevail, at least for a time. The "bottling up" of large quantities of East Texas gasoline undoubtedly is the reason for firmness in the gasoline market and this improved situation will continue as long as low priced gasoline from East Texas is kept off the market. Close observers of conditions in East Texas are not as optimistic about ultimate results of the buying program being inaugurated again as sponsors of that program. They contend the providing of markets for those inclined to cut prices and the stimulating of greater runs to stills might very easily bring the industry right back to where it was a few weeks ago. Those actively pushing the buying program claim the contracts being signed preclude such things but past experience in East Texas has made Missourians out of many oil men.

Results of the past week at least show what can be done if any real effort is made to excise a cancerous condition. Much of the comment on the results so far is coupled with the expression: "That is what the Federal government should have done more than a year ago." Despite the long delay, a far better feeling pervades the industry than for a long time and everyone sincerely is hopeful present efforts to curb "hot" oil activities in East Texas will be continued without any let-down. It is because of this feeling many students of the situation are skeptical of the buying program and fear it might eventually result in opening the door for renewed activities on the part of "hot" oil operators.

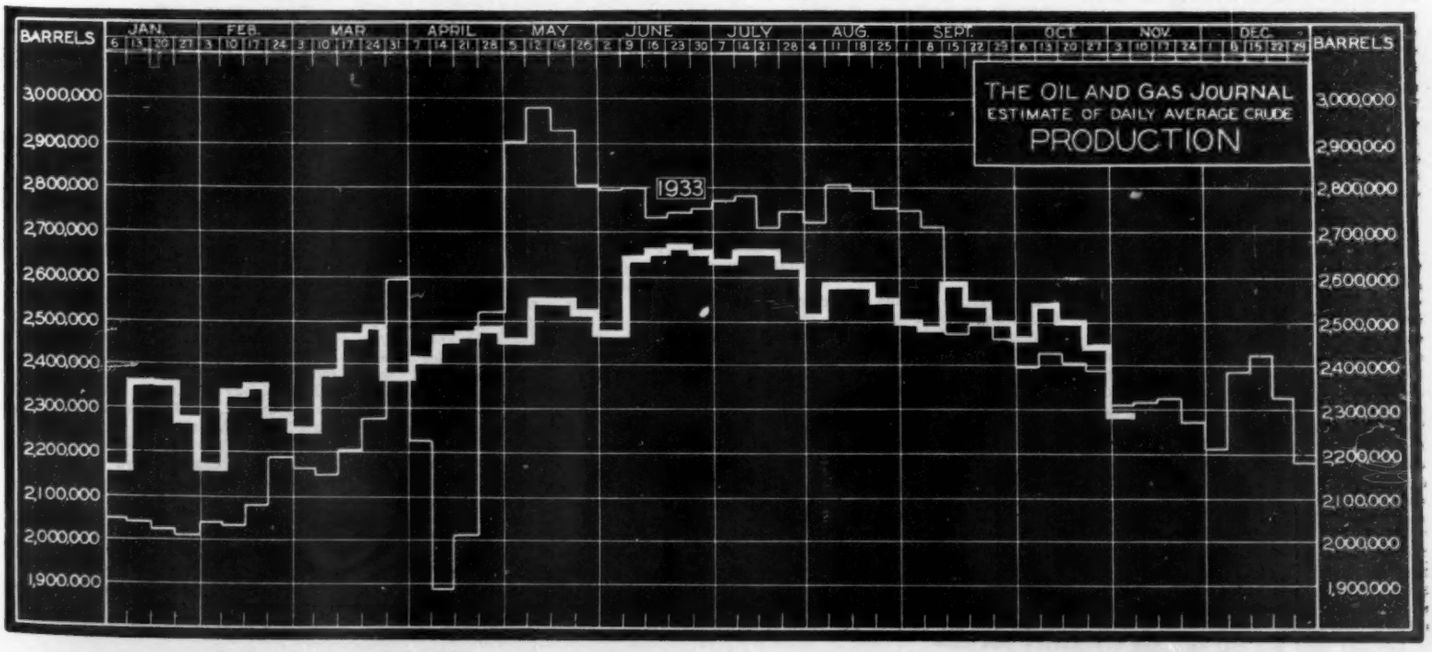
The annual convention of the American Petroleum Institute in Dallas next week may go a long way towards creating a better understanding of difficulties confronting the industry. Unofficial discussions, removed from the Washington atmosphere, will do a lot towards clarifying the outlook. The return to former postings by three Mid-Continent concerns which had cut prices indicates the present trend. The reduction in the East is regarded as a local condition.

Crude Oil Production in the United States

Estimated daily average production for the week ending November 3, a comparison with previous and the Federal allowables follow:

	Federal allowable		
	Nov. 3	November	Oct. 27
Oklahoma—			
Oklahoma City	108,950	.....	125,300
Seminole-St. Louis	69,025	.....	86,235
Remainder of State	222,475	.....	228,015
Total Oklahoma	400,450	459,300	439,550
East Texas—			
Lathrop	164,223	.....	195,453
Kilgore	127,823	.....	149,124
Joiner	122,724	.....	168,752
Total East Texas	414,770	.....	513,329
West Texas	140,774	.....	138,423
North Central Texas	84,510	.....	84,609
Texas Panhandle	62,023	.....	58,825
East Central Texas	42,973	.....	42,224
Gulf Coast—Texas	163,424	.....	162,653
Southwest Texas	60,053	.....	58,674
Total State of Texas	968,527	957,300	1,058,737
Kansas	119,975	125,000	124,755
North Louisiana	24,135	.....	23,925
Gulf Coast—Louisiana	81,473	.....	76,726
Total Louisiana	105,608	90,000	100,651
Arkansas	30,235	30,000	30,975
Eastern Fields (except Michigan)	104,000	96,000	103,700
Michigan	26,736	29,000	28,874
Rocky Mountain area	94,190	91,700	93,310
California—			
Santa Fe Springs	35,000	.....	35,250
Long Beach	51,250	.....	54,750
Mountain View	9,750	.....	12,250
Elwood	8,950	.....	10,000
Kettleman Hills	61,150	.....	60,000
Remainder of State	278,900	.....	292,750
Total California	445,000	462,000	465,000
Total United States	2,294,721	2,340,300	2,445,052

Decrease 150,331 Bbls. Daily.



Ickes Promises Live Talk Before Institute at Meeting in Dallas

Left to right: E. A. (Jack) Redding, Jimmie Flagg and J. I. Watson, all in the investigation division of the Department of the Interior at Kilgore

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Nov. 6.—Asked what action the oil administration was taking towards recommendations for oil legislation at the next session of Congress, Secretary Ickes said no action would be taken by him until the Cole committee submits its report. He said, "I will certainly want to know what the status of the Cole report is before we go ahead with any recommendations for legislation."

Queried as to the nature of his speech before the American Petroleum Institute at Dallas, he said it was an exceedingly good speech in which he would "call a spade a dirty shovel." He intimated that he would bring up in the speech some reprehensible marketing practices which he claims the industry is guilty of, but he would not divulge the nature of his charges.

In answer to a question as to whether he thought the appointment of a special assistant attorney general to prosecute violators of the marketing provisions of the oil code would be a good idea, in the light of the work done by L. R. Martineau in cleaning up the East Texas situation, he said he thought the Tender Board had stopped the flow of hot oil in that area. The question of such an appointment, he added, is for the Justice Department to consider.

After more than a week of conferences between members of the various local stabilization committees, set up by the Marketing Committee of the Planning and Coordination Committee, members of the Planning and Coordination Committee and members of the industry, as well as some government officials, all major companies have agreed to increase the retail price of gasoline. The amount of the increase has not been divulged, but it will probably place the price of this product at approximately where it was before the price cutting started. It is the hope of the major companies that this action will be followed by the independents selling unbranded motor fuel, who, it has been charged, were primarily responsible for the price wars.

Industry Criticized

Before this action was decided upon the opinion was voiced by one of the government officials that the industry was not co-operating with the Administration, and was also blocking the entire recovery program by the continuance of the demoralized marketing conditions. He said the industry claimed when evidence of the unstable condition of the retail market first became noticeable that "hot" oil was the only cause of the disturbance. The Petroleum Administration did its part towards stabilizing the conditions complained of by setting up the machinery and completely stopping the movement of "hot" oil, he continued. There is now no basis for the excuse that "hot" oil is undermining the market, he stated, and the industry should immediately begin to set its house in order by restoring an adequate market price for refined products.

It is his opinion that continued price wars, with the destructive consequences resulting therefrom, are definitely leading the industry closer to complete federal control. No better argument could be given to Congress, he continued, than the evidence shown by the industry in these recent price disturbances that demoralized markets result in waste and destruction which affect the entire people. In his opinion petroleum is affected with a national public interest, and continuation of the past activities he predicts will bring this to the attention of the legislators.

Revised Buying Plan

The revised buying plan under the guidance of the Program Committee will probably swing into action shortly. Arrangements have been made in the standard form of contract to pay 5 cents per gallon for gasoline so long as the posted price of crude oil in East Texas remains at one dollar. If the price of crude goes up, one-fourth of a cent per gallon shall be added for each 5-cent increase. If it goes down the price paid for gasoline shall also be reduced in the same ratio as the advance. The posted price for crude shall be the price posted by the majority of the major companies buying crude in the East Texas Field.

The price to be paid for the gasoline is based on motor fuel meeting U. S. Motor specifications and having an octane rating of 50-62. This grade shall be known as "basing grade" by the Program Committee, and is the product for which 5 cents shall be paid. Gasoline having an octane rating of 63 and above will bring a price one-fourth of a cent higher than the above.

Also included in the contract are provisions that no illegal crude shall be run through the refinery of anyone selling gasoline to the buying companies, provisions restricting the refiner from buying any crude, either legal or illegal, from any producer who is producing oil in excess of his allocation, and that the refiner will not produce more gasoline than is allowed him by the provisions of Article 4 of the Oil Code. The refiner also agrees to make all reports on his operations, with respect to the matters herein set forth to the Administrator or to the Planning and Coordination Committee or its agents at such time and in such manner and form as may be requested by them.

However, in signing this contract, the individual refiner does not signify his acquiescence as to the legality or correctness of any allotment, rule, order, or regulation made by the Administrator, and he shall not be estopped from contesting any such order, rule or regulation.

Any refiner signing this contract to sell gasoline to the buying companies must agree that if during the period of the contract he sells gasoline to someone else at a lower price than that embodied in the contract the company buying under the contract shall be allowed to purchase the same quantity of gasoline at the reduced price. It is believed this provision will stabilize the refined market in East Texas due to the fact that almost 100 per cent of the refining capacity of East Texas has signified willingness to abide by this plan.

Another Tender Board?

Appointment of a Federal Tender Board for the Gulf Coast to collaborate with the Tender Board functioning in East Texas has been considered by the Petroleum Administrator. However, due to the excellent manner in which the Board is performing in East Texas it is not thought necessary at the present time to appoint such a board to assist in controlling movement of oil. At the first sign that the first board cannot handle the situation, and it is found that a similar body on the Gulf Coast will assist, one will be appointed.

The Administration is determined that

(Continued on Page 31)

East Texas Is More Hopeful of Results But Doubtful About Legal Tests

By L. E. BREDBERG

FORT WORTH, Tex., Nov. 5.—The Federal Tender Board sitting at Kilgore is not only eliminating interstate shipments of illegal products, but is possibly responsible for the majority of the East Texas refiners signing the gasoline purchasing plan. Only a small minority of the refiners are holding out. Blank contracts were distributed at the East Texas refiners' meeting at Gladewater, November 3.

It is hoped that all plants from which gasoline is hauled by trucks, will come into the plan. To facilitate the movements of gasoline by trucks, a chief dispatcher will be placed at Kilgore to give delivery instructions to one of the major companies participating in the program. Kilgore is said to be centralized for truck movements, but Gladewater is also a large truck shipping point and another dispatcher will probably be placed there. If truck movements can be regulated the trucking contractors and marketers will be given the higher price, more than twice what the truck gasoline has been bringing over the State.

One refiner cut the price of gasoline in the field on November 3, but the majority, desirous of having the purchase plan reinstated, were asked by representatives of the East Texas Refiners Association to post a tank wagon and tank car price of 5 cents a gallon. It was selling for 2 and 2½ cents per gallon previous to the Federal tender board meeting at Kilgore on October 25.

On October 24, the day before the Federal Tender Board met, there were 1,170 cars of refined products, mostly gasoline, shipped out from the East Texas Field. The next day they had fallen to 185 cars and on October 29 there were 121 cars shipped intrastate, and only 7 shipped interstate, 25 cars were for coastwise shipping. On October 30 there were only 42 cars of gasoline moved, with no residuum moved. On October 24 there were 288 cars of residuum moved. Four days after the Federal Tender Board sat it was reported overproduction had been cut to 38,400 bbls. per day. On October 31, 63 out of 81 operating plants were shut down, and these are still shut down. Many of them have storage full of gasoline, much of which is said to come from "hot" oil on which tenders will not be given.

A semimajor company is taking inventory of one large independent refiner's holding in the field, including 71 wells and 350 acres.

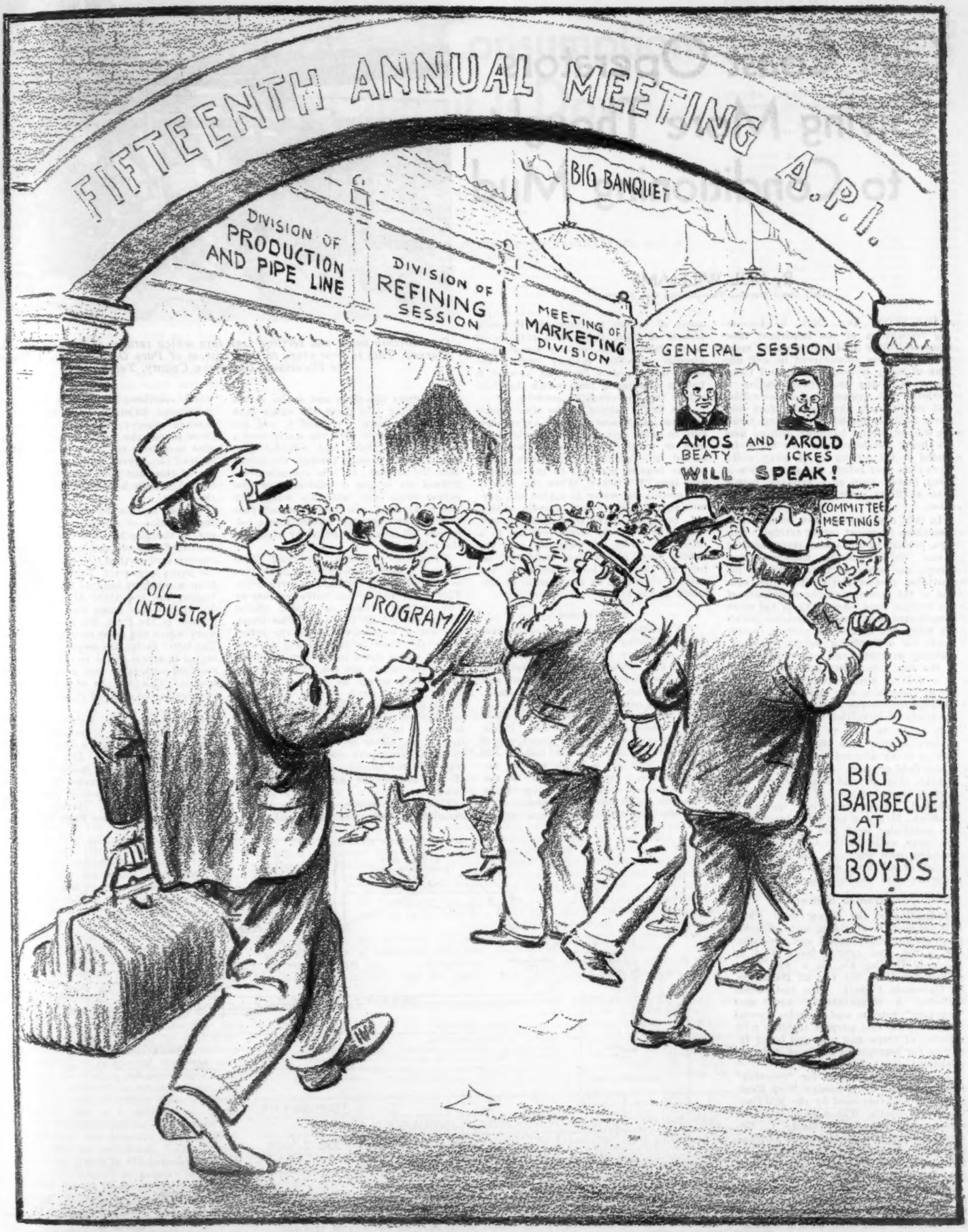
The Department of Justice has been arresting persons accused of false swearing to the OES forms and evading Federal taxes.

F. W. Fischer, Tyler attorney, has filed suit for a number of refiners, challenging the constitutionality of the Federal Tender Board's orders. Hearing will be heard by Federal Judge Randolph Bryant at Beaumont on November 17, the same day the suit against the McMurreys comes up. Judge Bryant has refused to grant a temporary restraining order against the board.

Some refiners are hoping the Federal tender order will be nullified. Federal Judge Randolph Bryant issued an order releasing 60 cars of gasoline because the cars were in transit before the Federal tender order was issued. Many other refiners are of the opinion that to contest the present tender board is to invite Federal control, therefore they are hopeful the gasoline purchase plan can be reinstated.

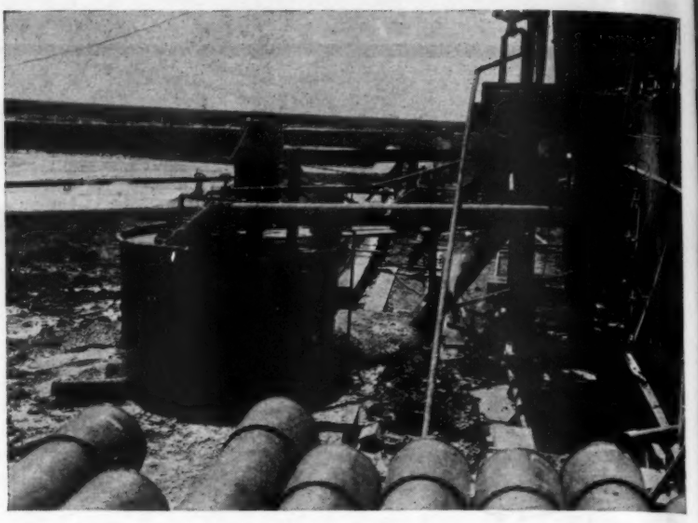
Dan Moody of Austin, Tom Foster of Dallas and R. E. Hardwicke, oil attorney of Fort Worth, were appointed as a committee this week to study the needs for statutory changes, and if necessary, to draft bills essential to obtain better state enforcement in the oil industry.

Several refiners and producers were assessed heavy fines in Gregg County during the week for failing to make daily reports, receiving untendered oil, operating by-passes and other infractions of the State's regulations. One day's trials brought a total of $68,600 in fines.



—Drawn exclusively for The Oil and Gas Journal

Gulf Coast Operators Giving More Thought to Conditioning Mud



Combination surge and settling tank into which returns from well are discharged. This is first stage in mud system of Pure Oil Co.'s No. 1 Shelor at Dickinson, Galveston County, Texas

By NEIL WILLIAMS
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Nov. 5.—Increasing recogniiton of the important functions of drilling fluid in overcoming many of the troubles encountered in well digging of today is resulting in Gulf Coast operators giving more consideration to methods and equipment for controlling and conditioning their mud. More adequate facilities for making, mixing, treating and otherwise handling drilling mud are being developed and are being included in the setting up of many wells. More than ever before, the mud system is being looked upon as a primary, rather than auxiliary, part of a drilling operation.

In this, mud systems now being put in sometimes represent rather extensive outlays, consisting of various traps, settling basins, ditches, mixing machines, mud screens and other mechanical devices for providing greater flexibiltiy in the control of the volume and characteristics of the drilling fluid. Auxiliary to the more complicated mud control systems which are being put in are the various instruments for determining weight, viscosity, colloidal strength and other properties of the mud. Such are becoming a part of a drilling well's equipment. A number of companies also maintain complete laboratories for the testing of muds and the study of formation conditions.

It might be well to mention in this connection that with the increasing attention being directed to drilling fluids, a new field of endeavor is being created; namely, that of mud engineering. Mud work is becoming more of a science with technical phases requiring specialized handling. Men now are being trained for this particular work and crews of more and more wells on the Gulf Coast are including mud engineers who remain on the job at all times and do nothing but supervise mud conditioning.

Advanced System

Indicative of the advancement which is being made in providing more adequate facilities for mud control and conditioning is the mud system being used by Edwards Drilling Co. on a well being drilled for Pure Oil Co. at Dickinson, in Galveston County. This installation embodies a comparatively new mud "cracking" process and includes special equipment for this purpose together with a series of traps and pits and other facilities for segregating muds of different qualities.

The special equipment for "cracking" mud was built by Kennedye Well Engineers Co. and furnished by the Mid-Continent Supply Co. The remainder of the system was laid out by Harry L. Edwards, president of the Edwards Drilling Co., and C. B. Kennedye, president of the Kennedye Well Engineers Co., in conjunction with the Pure Oil Co.

In operation of the system returns from the well are directed into a combination surge and settling tank. This is a circular steel tank with a conical-shaped bottom and having a capacity of 50 bbls. On the interior is an arrangement of baffles to force the incoming stream of fluid, laden with cuttings of sand, clays, shales, etc., to travel in a circular direction entirely around the tank, downward 4 feet and upward 6 feet to a skimmer from which the fluid enters the mud-cracking machine.

Jets in the bottom of the tank permit injection of streams of water under pressure to cause agitation. When additional mud or weight is desired the water is turned on, forcing, by agitation, more of the heavier material to the top and over into the cracker. When this mud is not needed the water is turned off, permitting the heavy sands, gravels, shales, etc., to settle to the conical-shaped bottom to be jetted by steam pressure to a refuse pit. With the water off, only the lighter clays and shales, which are on top, are able to leave the tank, the amount depending on the amount of agitation in the tank.

The Cracker

The cracker proper is a centrifugal machine having a shaft with a double helix of rubber broken at frequent intervals and encased in a horizontal steel shell. The shaft operates on torque and thrust bearings, being driven by a small, twin steam engine. For mud with a visvosity ranging from 25 to 40 centipoises only 1 horsepower is required. Below the shaft is an oil well type screen wound backwards so that the flat side of the trapezoid wire has a larger opening below the screen than on the face of the screen, thus preventing clogging. It is wound to approximately 40 mesh.

In the high-speed, centrifugal action of the drive the clays and shales in the fluid coming over from the surge tank are broken down ("cracked"), and are thoroughly mixed with the water into a homogeneous, stable and colloidal mixture and are pressed through the screen into the system. In this operation, entrained air or gas is released, and also coarse sands and materials which will not make mud and which cannot pass through the screen are ejected into a collection pit and then jetted by steam to the refuse pit.

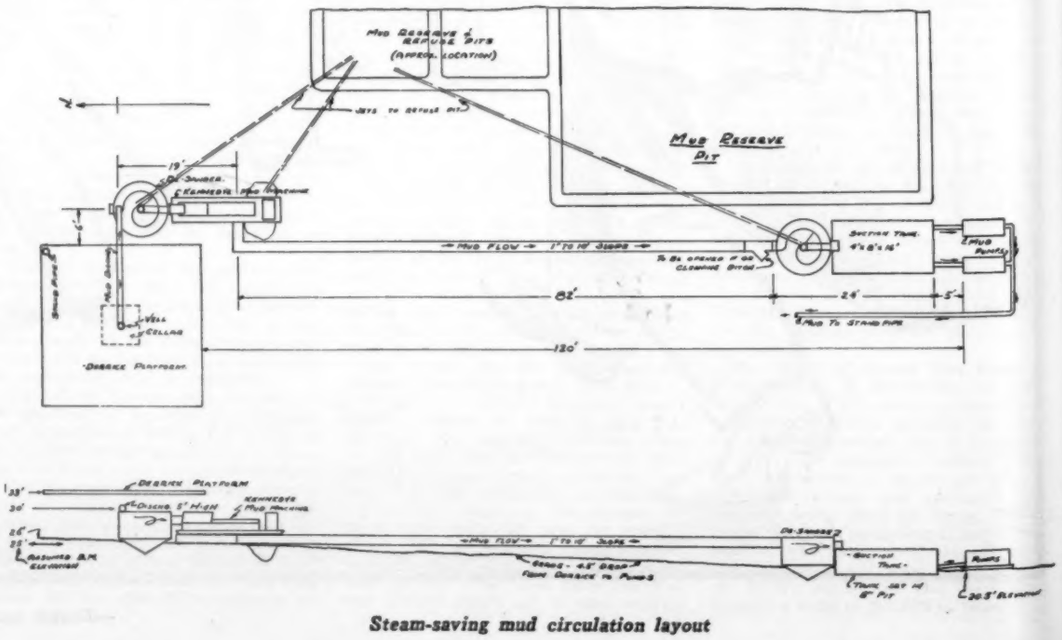
From this machine, the fluid flows through a high velocity steel ditch into one end of a long rectangular earthen pit. This pit is divided into three sections by two wooden dams, or traps, placed across the pit at intervals. The traps, one set a little lower than the other, cause the fluid to flow slowly in successive stages down to the last pit, from which the pumps are fed. The first pit, or section, serves as a final settling basin. There, much of the fine sand, which may have passed through the centrifugal cracking machine, drops to the bottom to be jetted by steam through a line to the refuse pit. The fluid which is on top and flows over the top of the trap into the second, or middle, section of the pit is the good mud for the pumps.

This middle section serves as an accumulation basin for the good mud, which overflows into the pit which feeds the pumps. Adjoining these pits is a large earthen reserve pit. Lines connecting them permit the jetting by steam of surplus mud from the working pits into the reserve pit. Return lines permit the flowing of this mud back into the system as needed, simply by opening the valves in the lines.

Unique in this set-up is the fact that the elevation of the pumps at the lower end of the pits is below the level of the mud feed. In contrast to the customary suction feed method, the fluid flows into the pump by gravity. This not only maintains a constant head on the pump, eliminating the possibility of any air being drawn into the pump and becoming entrained in the fluid, but also lessens the work which has to be done by the pumps. The latter factor has meant an important saving in steam power as the pumps have required noticeably less pressure for operation. This will be of particular advantage in the event of fighting gas pressures.

Incidentally, two boilers have been provided to supply steam only for the mud pumps. Each has a capacity of 350 pounds pressure and 135 horsepower. Steam for the engines, boiler feed pumps and other uses is generated by two additional boilers of 250 pounds pressure and 100 horsepower each. Having two boil-

(Continued on Page 33)



Steam-saving mud circulation layout

World Production and Consumption Gain; America's Output Is Down

By V. R GARFIAS and R. V. WHETSEL
Foreign Oil Department, Henry L. Doherty & Co., New York

The world's production of petroleum in 1934 will equal, if not surpass, the peak output of 1929 and if the production of natural gasoline, benzol and related liquid fuels is added to that of crude petroleum the total output for this year will certainly be the highest in the history of the industry. This high yield has been reached when the fields of the United States—which produce close to 62 per cent of the total and are capable at present of larger output—have been allowed to produce only about 1¼ per cent more than in the preceding year.

All other important producing countries, except Venezuela, Mexico and Colombia, will probably reach or equal all-time peaks during the year. It should be noted further that Venezuela's production this year will be surpassed only by that of 1929 and 1930, that the Mexican fields—which have been on the decline for 12 years—will produce in 1934 more than in any one of the previous three years, and that the output of Colombia will be about 25½ per cent larger than in 1933.

The world's consumption of petroleum, its products and related fuels in 1934 is estimated at 1,438,000,000 bbls. This amount does not equal the peak consumption of 1929, but is a substantial increase—distributed throughout all the important consuming countries—over that of the previous year, and the highest for the last four years, the only ones for which world statistics of consumption are available. The estimated increase in consumption in 1934, however, is some 98,000,000 bbls. less than the increase in supply, so that there will be an overproduction of that amount compared to one of 88,000,000 bbls. in 1933.

The increased consumption within the United States is estimated at 4 per cent, in France at 5¼ per cent, in Canada at 8 per cent, in the United Kingdom close to 10 per cent and in Germany at about 15 per cent. In Russia the small increase in consumption, the decline of exports and the added production will probably result in a heavy increase in petroleum stocks. This above-ground reserve has been often ascribed to the importance the country places on an ample available supply of fuel in case of international difficulties. Similar precautions are being taken by Japan which has made it mandatory on petroleum marketers to keep at all times a six months' supply in storage.

The disorganized condition of the petroleum industry, notwithstanding increasing consumption near its peak during the last three years, again illustrates its inability to co-operate constructively. Many of the leading industries have been adversely affected in recent years, but almost without exception this has been primarily due to a decrease—in some cases a ruinous decrease—in demand for the products the industry supplies. Why the American petroleum industry—the controlling factor in the petroleum world—has been unable to prosper while the demand for its products increases is a question difficult to explain particularly to those engaged in industries contending with reduced markets. It is to be hoped that the "muddling through" period of the industry will come to an end before inadequate oil reserves make a more efficient program inevitable, and to this end the necessity of the adoption of "unit operation" of oil pools becomes more and more apparent.

TABLE 1—WORLD PRODUCTION OF PETROLEUM AND RELATED FUELS
(In thousands of barrels)

	1933			1934			
	Petroleum	Natural gasoline, benzol, etc.	Total	Petroleum	Natural gasoline, benzol, etc.	Total	Remarks
United States	898,874	35,083	933,957	910,000	36,000	946,000	1¼ % inc. over 1933
Russia	147,077	660	147,737	165,000	750	165,750	New peak
Venezuela	120,882	460	121,342	136,000	600	136,600	12½ % inc. over 1933
Rumania	50,971	850	51,821	58,500	1,000	59,500	New peak
Persia	49,581	800	50,381	52,000	850	52,850	New peak
Dutch East Indies	38,513	1,600	40,113	41,800	1,700	43,500	Peak
Mexico	33,905	382	34,287	35,200	450	35,650	4% inc. over 1933
Colombia	13,157	380	13,537	16,600	400	17,000	25½ % inc. over 1933
Argentina	13,955	220	14,175	14,100	250	14,350	New peak
Peru	13,925	920	14,845	14,000	1,000	15,000	Peak
Trinidad	9,560	90	9,650	10,900	100	11,000	New peak
India	8,543	110	8,653	8,800	100	8,900	Peak
Iraq	1,200	.....	1,200	4,000	...	4,000	New peak
Poland	3,865	501	4,366	3,600	400	4,000	
Sakhalin	2,600	.....	2,600	2,600	.....	2,600	Peak
Sarawak	2,288	50	2,338	2,000	50	2,050	
Japan	1,935	110	2,045	2,000	130	2,120	
Germany	1,721	3,159	4,880	2,000	3,100	5,100	New peak
Ecuador	1,623	.....	1,623	1,800	.....	1,800	New peak
Egypt	1,591	41	1,632	1,450	50	1,500	
Canada	1,147	.....	1,147	1,350	.....	1,350	
Others	907	3,892	4,799	1,600	3,700	5,300	
Total	1,417,820	49,308	1,467,128	1,485,300	50,620	1,535,920	New peak

Production of petroleum and related fuels is summarized in Table 1, showing actual production in 1933 and the estimates for 1934. Petroleum is shown separately from other related fuels, and the total is given in order to arrive at figures comparable to those of consumption.

Table 2 summarizes world consumption of petroleum and related fuels in the 50 ranking countries. Necessarily figures of consumption are but estimates derived in most cases from production, import and export figures. This notwithstanding, it is believed the table gives a fairly accurate over-all picture. Consumption statistics for 1934 are, of course, preliminary estimates based on data thus far available. In practically all cases fuel oil for ships' bunkers is included as part of the domestic consumption of the country where the bunkers were supplied.

TABLE 2—CONSUMPTION OF PETROLEUM, ITS PRODUCTS AND RELATED FUELS
(In thousands of barrels)

	1933	1934
1. United States	865,447	900,000
2. Russia	95,500	97,000
3. United Kingdom	66,903	73,500
4. France	37 059	39,000
5. Canada	31,471	34,000
6. Germany	23,537	27,000
7. Argentina	20,700	21,400
8. Japan	15,190	15,500
9. Mexico	14,885	15,000
10. Rumania	13,386	14,500
11. British India	12,660	12,900
12. Italy	12,612	13,100
13. Dutch East Indies	10 100	10,300
14. Australia	10,000	10,800
15. Persia	8,855	9,000
16. Dutch West Indies	8,100	8,700
17. China	7,745	8,100
18. Holland	7,311	7,700
19. Sweden	6,062	6,200
20. Venezuela	5,900	6,400
21. Spain	5,431	5,300
22. Egypt	5,380	5,300
23. Brazil	4,434	4,600
24. Denmark	4,340	4,500
25. Belgium	4,220	4,300
26. Cuba	3,589	3,600
27. Union of South Africa	3,167	3,600
28. Norway	3,371	3,450
29. Philippine Islands	3,351	3,400
30. Czechoslovakia	3,220	3,400
31. Switzerland	3,010	3,140
32. Poland	2,810	2,800
33. Hawaii	2,762	2,820
34. New Zealand	2,592	2,670
35. British Malay	2,440	2,300
36. Trinidad	2,327	2,480
37. Uruguay	2,250	2,300
38. Chile	1,984	2,100
39. Algeria	1,952	2,150
40. Panama Canal Zone	1,921	2,100
41. Austria	1,920	2,000
42. Iraq	1,881	2,300
43. Irish Free State	1,838	1,790
44. Hungary	1,408	1,500
45. Greece	1,388	1,490
46. Peru	1,350	1,400
47. Porto Rico	1,353	1,380
48. Portugal	1,138	1,150
49. Finland	1,012	1,100
50. French Morroco	981	1,000
Others	25,607	26,500
Total	1,378,650	1,438,020

Pipe Line Company Engineers Are Studying Means for Standardization of Valves and Fittings

A movement has been started by Stanolind Pipe Line Co. and several other major pipe line companies in Tulsa to bring about the standardization of pipe line valves and fittings. This preliminary work has been carried on by a committee appointed last July by the Mid-Continent Petroleum Division of the A.S.M.E. and their preliminary report is now ready to be presented to the proper committee on standardization at the annual A.P.I. meeting to be held in Dallas, next week.

The committee has prepared the accompanying table of standards and has sent copies to all pipe line companies and manufacturers who may be interested in this movement to standardize dimensions and it is asked that comments and suggestions be sent to the Secretary for the Mid-Continent Petroleum Division, A.S.M.E., 213 Midco Building, Tulsa, so that they may be assembled for presentation at Dallas.

Steel flanges have been standardized by the American Standards Association. The 350 and 500-pound pressure class of cast iron valves as manufactured agree with the "Series 30" steel flanges are already standardized and practically all valves for this working pressure are now built to the same dimensions.

For 800-pound working pressure valves and fittings the manufacturers are in close agreement on some details but it is suggested that all valves and fittings of this class should be provided with bolt holes in multiples of four to permit quartering the position of the valves. These slight changes can be made readily it is believed and it is therefore proposed for this capacity cast iron fittings that the 800-pound American Hydraulic Standard be accepted as to body length and drilling. This agrees in drilling with the "Series 60" steel flanges, which is already a standard of the American Standards Association.

The table gives the proposed standards as recommended by the committee appointed by the A.S.M.E.

PROPOSED A.S.M.E. STANDARDS—DIMENSIONS AND DRILLINGS FOR CAST IRON FLANGED FITTINGS AND VALVES (GATE, PLUG AND CHECK*)

Working pressures 350 lbs., 500 lbs. and 800 lbs.—Water, oil and gas.
All dimensions in inches. Bolt holes ⅛" larger than nominal bolt size.

L—Face to face dimension including raised face.
T—Minimum thickness of flange not including raised face.
R—Amount of raised face.
D—Diameter of end flange
B—Diameter of bolt circle.
N—Number of bolts.
b—Size of bolts.

FITTING SIZE	2"						3"						4"						6"						8"						10"						12"					
	L	T	R	D	B	N	b	L	T	R	D	B	N	b	L	T	R	D	B	N	b	L	T	R	D	B	N	b	L	T	R	D	B	N	b	L	T	R	D	B	N	b
350# & 500#	7¼	13/16	1/16	6½	5	8	⅝	9½	1 1/16	1/16	8½	6⅝	8	¾	9½	1 5/16	1/16	10	7⅞	8	¾	13	1⅜	1/16	12½	10⅝	12	¾	14½	1 5/16	1/16	15	13	12	⅞	16⅝	1 5/16	1/16	17½	15¼	16	1
800#	11½	1¼	¼	6½	5	8	⅝	14	1½	1¼	8½	6⅝	8	¾	17	1⅞	¼	10⅝	8½	8	⅞	22	2½	¼	14	11½	12	1	26	2½	¼	16½	13⅝	12	1⅛	31	2⅞	½	20	17	16	1¼

FITTING SIZE	2"						3"						4"						6"						8"						10"						12"					
	L	T	R	D	B	N	b	L	T	R	D	B	N	b	L	T	R	D	B	N	b	L	T	R	D	B	N	b	L	T	R	D	B	N	b	L	T	R	D	B	N	b
350# & 500#	7¼	13/16	1/16	6½	5	8	⅝	9½	1 1/16	1/16	8½	6⅝	8	¾	9½	1 5/16	1/16	10	7⅞	8	¾	13	1⅜	1/16	12½	10⅝	12	¾	14½	1 5/16	1/16	15	13	12	⅞	16⅝	1 5/16	1/16	17½	15¼	16	1
800#	11½	1¼	¼	6½	5	8	⅝	14	1½	1¼	8½	6⅝	8	¾	17	1⅞	¼	10⅝	8½	8	⅞	22	2½	¼	14	11½	12	1	26	2½	¼	16½	13⅝	12	1⅛	31	2⅞	½	20	17	16	1¼

NOTE:
The 350-lb. and 500-lb. dimensions agree with the present standard Series 30 steel flange.
The 800-lb. dimensions agree with the present standard Series 60 steel flange except flange thickness.
The body lengths of the 350-l . and 500-lb. fittings agree wi h the majority of the manufacturers' present products.
The body lengths and drillings of the 800-lb. fitt ng agree with the American Hydraulic Standard for 800-lb. cast iron flanged fittings.
*Check valve of any pressure to agree in drilling with gate valve drilling of that pressure.
Check valve lengths of all pressures to be the length of 800-lb. gate valve.

Natural Gas Repressuring Reviving Triumph Hill and Fagundus Pools

By ROBERT C. CONINE

TIDIOUTE, Pa., Nov. 5.—After more than half a century Triumph Hill, Fagundus and near-by fields along the Allegheny River are stepping out of scrap book lore into current history, thanks to natural gas repressuring of the sands that broke the crude oil markets in the early seventies.

In spite of the long history of the Venango oil sands, few formations of comparable interest have been so scantily described, so it is with considerable thankfulness that the producers of the district learn that the Pennsylvania Grade Crude Oil Association, through the geological staffs of its members, is preparing a comprehensive topographical survey of the Venango sands region and will add abundantly to data on underground conditions. As noted in an article in the October 25, issue of The Oil and Gas Journal concerning the Oil City-Titusville district, Norman Maxwell, of Crew-Levick Oil Co., has been probably the largest contributor of geological information covering the entire middle district. The accompanying map showing the oil pools discussed in this article is based largely on one prepared by Mr. Maxwell, and shown more fully in the broken outlines.

Pool Outlines and Sands

The Triumph Pool, extending from a point just east of Enterprise to Tidioute and across the Allegheny River, is little more than 1,000 feet wide. The principal producing sand is the Third Venango. The Third sand is reached at as little as 98 feet depth near the river, where the Second sand outcrops, and some Fourth sand has been reached by the drill. In the hills there are spots of First and Second sand from which production has been negligible. The average thickness of the Third sand in this pool is 40 feet.

The Fagundus Pool, an irregular circle in form, has a diameter, roughly, of 1 mile. The Third sand extending over most of this pool averages 40 feet in thickness, and is reached at depths ranging from 390 feet to 800 feet. Along the borders adjacent to the river, the Third sand pinches out and First sand Pool continues to a point just short of the river. In this First sand a number of 100-bbl. wells were drilled in 1900, and some of these are now included in a somewhat tentative repressuring program.

Natural gas used in repressuring the Clinger Oil Co. holdings in the Fagundus Pool comes from the Queen Pool, northeast of Fagundus. This Queen Pool was one of the marvels of 1924. The producing formation, designated as Queen sand, is reached at a depth of 1,000 to 1,100 feet, and contributed 1,000-bbl. gushers for a brief space, although one of the wells held a production of 700 bbls. a day at the end of six months. Now there are a few twelfth of a barrel pumpers still in operation and a number of gas wells. The gas is moved to Fagundus a distance of 7 miles in 2 and 3-inch pipe. No successful attempt at repressuring the Queen sand is recorded.

The Trunkeyville-West Hickory Pool describes a quarter-arc south of the Fagundus Pool. The Third sand is the principal oil formation here, and although this sand is 150 feet thick in some spots, the average thickness for the pool is about 25 feet. The Third sand is reached around 750 feet in the upland, and at 150 feet near the river. Between this pool and the Fagundus some connection may be traced, although wells drilled inside the narrow joining strip have had meager oil showings and have been abandoned as nonpaying propositions. However, certain geologists hope to find a commercial pool between Fagundus and Trunkeyville-West Hickory.

Fagundus Repressuring

The lease discussed here was developed in 1870 and has been in constant operation since that date. The Third sand contains very little cementing material and the permeability of a large section of the 40-foot stratum is unusually high. Although the formation is more compressed at the bottom, there are streaks of loose texture near the lowest levels. Naturally, the sand as a whole requires little pressure for introduction of the proper volume of gas to move the oil.

In 1924 there were 127 wells on the pump on the Clinger Oil & Gas Co. lease of 800 acres in the Fagundus Pool. These wells produced about 15 bbls. of oil a day. Today, with only 100 acres under "five-spot" pattern gas repressuring development, production on the lease has risen to 80 bbls. a day. It is pointed out that this output can be increased materially within a short time, when economic conditions warrant, by converting a number of old pumpers to gas inlet wells.

In the 100 acres under development there are 13 gas intake wells affecting 40 oil producing wells. As an indication of the response of these old wells to repressuring, and their productive life in secondary recovery, may be cited the experience with a producer drilled in 1874, and which in 1929 was producing one-twelfth of a barrel of oil a day. After repressuring in the last weeks of 1929, production of this well jumped to 10 bbls a day, and the output now is 1½ bbls. a day. The 13 intake wells take 75,000 feet of gas per 24-hour day, a low figure which may be traced to a hesitancy to increase output of oil at this time.

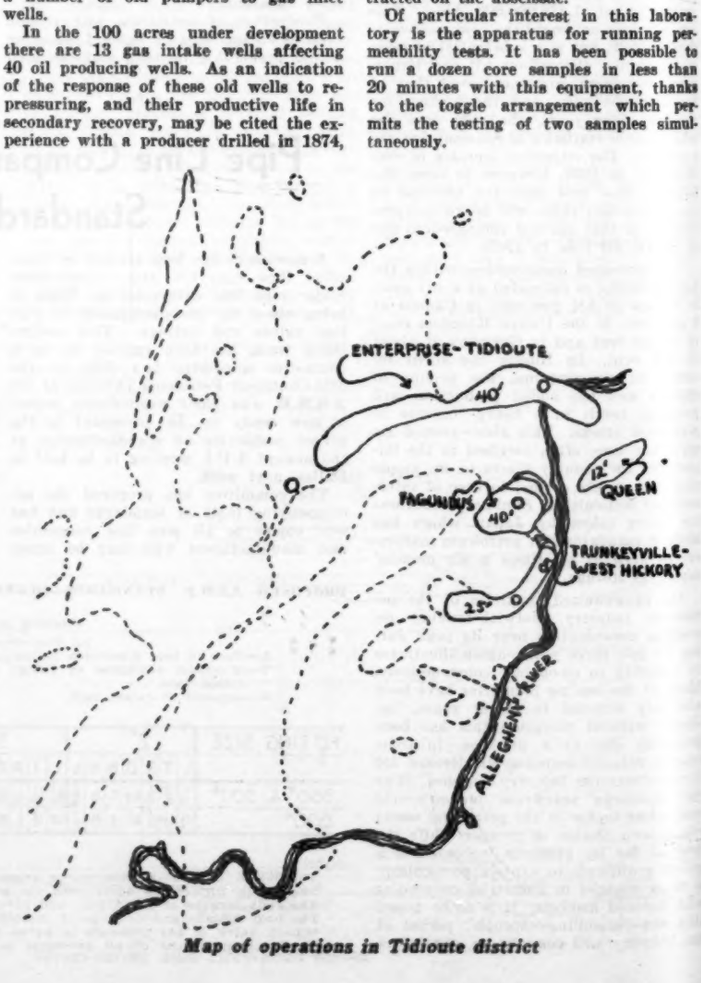
Completing Laboratory

What will be the largest and most complete laboratory for testing core samples, south of Bradford in the region, is nearing completion in the large shop and office building of the Clinger company in Tidioute. Principal tests to be run in the laboratory will be on permeability, saturation and porosity. Permeability, to determine fluid flow characteristics of the sand; saturation, to ascertain the oil content of the sand in situ, and porosity as an aid in determining saturation.

Saturation will be determined by two methods. By retort, or heat distilling of the core sample, and by colorimeter in which the sample is freed of its crude oil content in a Soxhlet carbon tetrachloride extractor, and the resulting solution checked against pure carbon tetrachloride in a Saybolt colorimeter.

Although there has been considerable criticism of both of these methods, none other is available and the one will be checked against the other. Critics of the colorimeter method have said that a saturation of 300 per cent may be found by this method, although they admit some operators obtain very sound results as a rule. Those who frown on the retort method point out that the heat required, around 700° F., changes the composition of the crude oil and disarranges all calculations. Needless to say, the oil extraction equipment must be calibrated, and there is little difficulty connected with the plotting of a curve (straightline) showing the (estimated) actual content of the sand on the ordinate, and the amount of oil actually extracted on the abscissae.

Of particular interest in this laboratory is the apparatus for running permeability tests. It has been possible to run a dozen core samples in less than 20 minutes with this equipment, thanks to the toggle arrangement which permits the testing of two samples simultaneously.



Map of operations in Tidioute district

Administrator's Report on Crude Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended October 27 totaled 330,946,000 bbls., a decrease of 1,035,000 bbls. from a total of 331,981,000 bbls. on hand at the end of the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announced today. This decrease, which followed a decline of 837,000 bbls. during the previous week, comprised declines of 981,000 and 54,000 bbls. in stocks of domestic and foreign crude, respectively.

According to current reports of the industry for the week ended October 27, in comparison with those for the previous week, daily average crude production declined 64,000 bbls., daily average imports increased 28,000 bbls., and the daily average withdrawal from stocks was 28,000 bbls. higher. Crude runs to stills for the week averaged about 2,465,000 bbls., a decline of about 30,000 bbls. from the previous week. The approximate daily average balance of crude oil during the week ended October 27 was as follows (barrels): Production, 2,416,000; imports, 85,000; decrease in stocks, 148,000, equals runs to stills, 2,465,000; exports, losses, etc., 184,000.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

	Stocks held by reporting companies		Change from
Grade of crude oil—	Oct. 20, 1934 (bbls.)	Oct. 27, 1934 (bbls.)	Oct. 20, 1934 (bbls.)
Pennsylvania Grade	4,628,000	4,687,000	+59,000
Other Appalachian	1,165,000	1,159,000	—6,000
Lima-Northeast Indiana-Michigan	1,432,000	1,449,000	+17,000
Illinois-Southwest Indiana	11,412,000	11,443,000	+31,000
North Louisiana and Arkansas	10,059,000	10,058,000	—1,000
West Texas and Southeast New Mexico	30,067,000	29,639,000	—428,000
East Texas	33,084,000	33,318,000	+234,000
Other Mid-Continent	157,091,000	156,147,000	—944,000
Gulf Coast	18,304,000	18,015,000	—289,000
Rocky Mountain	27,697,000	27,732,000	+35,000
California	34,209,000	34,530,000	+321,000
Total domestic crude	329,148,000	328,167,000	—981,000
Foreign crude	2,833,000	2,779,000	—54,000
Total crude	331,981,000	330,946,000	—1,035,000

Natural Gasoline Association Starts New Motor Fuel Research Program

By W. T. ZIEGENHAIN

Mindful of the benefits derived from the original program of research under the direction of Dr. G. G. Brown, of the University of Michigan, the Natural Gasoline Association of America, through its president, D. C. Williams, of the Continental Oil Co., announces a similar program of work to start immediately. The broad influence of the work undertaken has attracted the interest and support of automotive engineers as well as the united support of the natural gasoline industry. The study will also prove of great interest and of direct benefit to the refining industry.

Under the direction of Dr. George G. Brown, director of chemical engineering at the University of Michigan, and nationally known authority on motor fuels, the project will cover a long series of practical experiments to demonstrate the actual value of high volatility motor fuels in standard motor cars having their intake manifolds modified to function at temperatures sufficiently low to handle this type of fuel.

It is estimated that the complete series of tests will cover a period of about two years during which time both chassis dynamometer and road tests will be made with several makes of cars under all types of road and weather conditions. All of the research facilities of the University of Michigan Engineering Research Laboratories will be made available for use in the project and exhaustive tests along several lines of technical reasoning are included in the plans.

Funds for starting the project have been raised largely within the membership of the association itself though certain other interests are being asked to contribute since all successful results will be equally beneficial to motor fuel manufacturers as well as to the automotive industry. Fire tests are scheduled to start early in November and will be continued throughout the winter as the first cold weather phase of the project.

The new research program was prompted by conclusions drawn from experiments made by Doctor Brown last year on the potential value of motor fuel as determined by octane number and total volatility. As consulting engineer of the association, Doctor Brown reported his findings in a paper on the subject[1] before the thirteenth annual convention of the association last May. His work agreed with and closely paralleled that of Neil MacCoull,[2] director of mechanical research, Texas Co., who conducted similar tests for his company with modern motor cars and using gasolines ranging in endpoints from 312° F. to 432° F.

Value Not Realized

Doctor Brown indicated in his report that the modern automotive engine rarely made full use of the potential value of present motor fuels as indicated by their octane ratings. The reason given was that the engines were not designed to take full advantage of the actual value offered. He said that somewhat the same condition exists in regard to volatility, in that few if any engines really use the full volatility of standard grade fuels. It is generally conceded, however, that all engines make full use of starting volatility as indicated by the lower end of the A.S.T.M. distillation just as they use the warming-up volatility evident in low 50 per cent points. "Therefore, lower end or 'partial' volatility of motor fuel is always effective in controlling starting and warming up, or acceleration, on all cars and represents not simply potential value but actual service in all cases.

"Upper end of 'total' volatility, as represented by low 90 per cent points, indicates the ability of the fuel to deliver a substantially dry mixture at low manifold temperatures. But no advantage is obtained by the use of fuels of this type unless the mixture temperature is decreased, just as there is no advantage in the use of fuels of high octane number unless the compression ratio is increased."

In summarizing his work Doctor Brown concluded that "The simplest way to increase the power output of a motor is to use a cooler mixture. This can be successfully accomplished only with volatile fuels of low 80 or 90 per cent points in the A.S.T.M. distillation. Therefore, the potential value of a fuel is increased by increasing its volatility at the 80 per cent point.

Octane Requirement Affected

"The data available on the potential value of increased octane number, and increased total volatility, indicate that a decrease of 5° F., in the 80 per cent point on the A.S.T.M. distillation increases the potential value of the fuel as much as an increase in knock rating of one octane number, entirely aside from any effect increased volatility may have upon octane number."

Enlarging on the first point, the report shows by experiments that a decrease in the mixture temperature from 200° F. to about 140° F., is as effective in increasing the potential power output as increasing the octane requirements of the fuel from 55 to 76. If at the same time the volatility of the fuel is increased, a condition which would be permitted by the lower intake temperature, it is likely that not only would engines of a certain size give more power, but equal power would be obtained from a smaller engine. In the latter case a definite fuel economy would be realized, a factor for which both the motor and motor fuel manufacturer are constantly striving.

In his paper[3] before the International Automotive Engineering Congress a year ago, Mr. MacCoull drew almost identical conclusions in summarizing his work. He said in part: "Probably one of the most important findings in this work has been the serious consequences of too much heat to the intake manifold. A decade ago the expectations of a steadily decreasing fuel volatility induced engine designers to apply a fair amount of excess manifold heat, so as to be on the safe side for the gasoline which might have to be used in their cars before they were many years old. The last two or three years have seen so much vapor-lock trouble as a result of this policy, when using the light gasolines now regularly available, that much of this excess heat has been removed. Also, gasoline refiners have lowered the allowable vapor pressure of gasoline purposely to reduce this trouble, even though it may have reduced the ease of starting in cold weather.

"There is still, however, a strong temptation to provide excess heat because it reduces the warming-up period for a cold engine. Against this should be balanced the fact that raising the mixture temperature in an engine 100° F. above the minimum required for good distribution may produce a power loss of about 13 per cent and raise the antiknock requirement about 10 octane units."

Fuel Intake Modified

In view of the conclusions reached by both these outstanding research engineers through actual tests with various motors and fuels, it is reasonable to suppose that a research program which has as its purpose the practical proof of the advantage of volatility where proper fuel induction systems are used, might very well result in changes in engine design as well as in general fuel specifications. The proof in this particular case is to take the form of experiments in changing or modifying the fuel intake system on different makes of cars so that the engines of those cars may take full advantage of the actual value of the more volatile fuels under actual driving conditions in all weather.

Such results would be favorable to all parties concerned including the motoring public. Natural gasoline manufacturers could reasonably expect a somewhat wider market for their product, many refiners would have a place to put their excess butane, engine designers could boost compression ratios and build smaller and more economical engines and the car owner would have a more economical and more flexible transportation unit.

All of the fuels used are to have the same octane number and the compression ratio and adjustments of the standard car are to be such that the standard regular fuel operates at the point of incipient knock. Where the engines have a high compression ratio corresponding adjustments will be made so that the high volatile fuel with the cold manifold operates at the point of incipient knock.

The first series of tests contemplated consists of:

1. Standard car and regular standard fuel.
2. Standard car with a high volatile fuel.
3. Car equipped with cold manifold but using regular fuels.
4. Car equipped with cold manifold but using high volatile fuels.
5. Car equipped with cold manifold and high compression ratio so as to take full advantage of the cold manifold and using the high volatile fuel.

Full Chassis Used

In making the chassis dynamometer tests the entire car is to be tested by running the car on a dynamometer taking the power developed off the rear wheels

(Continued on Page 33)

New Jersey Buys Gulf Interest in Iraq; Socony Takes Over Marketing in Italy

NEW YORK, Nov. 5.—The Standard Oil Co. (New Jersey) has acquired the interest of the Gulf Oil Corp. in the Near East Development Co., one of the four principal owners of the Iraq Petroleum Co., Ltd., according to information made available here this week. While the deal which has been in the making for some time had not been officially announced at this writing, the details of the transaction have been known here for several days. It is also reported that the Gulf corporation has sold its marketing interests in Italy to the Socony-Vacuum Oil Co., Inc., the two sales constituting the most important transaction of the year in foreign oil circles.

The Iraq Petroleum Co., Ltd., owns a valuable concession in Iraq with large crude oil production which has just been made available in European markets through the completion of a 50,000,000 pipe line with terminals at Haifa and Tripoli on the Mediterranean. It is expected that within another six months the pipe line will deliver 80,000 to 85,000 bbls. of crude oil daily produced in the company's Kirkuk Field in Iraq.

Four important oil interests—Royal Dutch-Shell, Anglo-Persian, the French group and the Near East Development Co.—each owns 23¾ per cent of the Iraq company. The Near East Development Co., which constitutes the American group, originally consisted of the Standard Oil Co. (New Jersey), Standard Oil Co. of New York, Atlantic Refining Co., Pan American Petroleum & Export Co. and the Gulf Oil Corp., sharing equally in the stock of the company and each controlling in this manner what amounted to a 4¾ per cent interest in the entire Iraq company.

The Standard Oil Co. (New Jersey) later acquired the interests of the Pan American company, at that time controlled by the Standard Oil Co. (Indiana), and also of the Atlantic Refining Co., giving it a controlling interest in the Near East Development Co. and a 14¼ per cent interest in the Iraq company. The purchase of the Gulf interest boosts this percentage to 19 and a control of the American representation except for the 4¾ per cent interest in the hands of the Socony-Vacuum Oil Co., Inc., successor to the Standard of New York. The Standard of New Jersey and Socony-Vacuum are associated in other foreign projects, the most important of which is the joint ownership of the Standard-Vacuum Oil Co., operating in the Orient.

The reported price paid for the Gulf interest was $4,500,000. Some believe this figure too low based on recent estimates placed on the value of the Iraq concession and properties of the Iraq company.

It is believed the sale of the Gulf properties in Italy to Socony-Vacuum was due to the fact that the former company did not care to make the necessary additional expenditures to continue operations there under the control act of the government. This law will ultimately force all distributors which expect to do business in that country to build refineries there and import crude oil supplies rather than finished products as is now done by a majority of the companies. The Socony-Vacuum company recently acquired a small refinery in Italy and is now making plans to enlarge and modernize the plant for operation under the new control act. The reported price paid for the Gulf's Italian properties was $2,000,000.

There is also persistent rumors to the effect that Gulf's valuable properties in Venezuela may be involved in another deal with the Sonocy-Vacuum or Standard of New Jersey as the probable buyer. The latter company greatly strengthened its position in Venezuela two years ago when it acquired the foreign properties of the Pan-American Petroleum & Transport Co., and it is now the largest producer in that country.

2 New Rotaries
CHECK THESE

- ✓ High Speed Rotaries for Faster Drilling.
- ✓ Greater Strength for Deep Drilling and Heavy Loads; Recommended Drilling Load 12,000 ft., 4½" Drill Pipe.
- ✓ Convenient, Safe, High Speed Operation.
- ✓ Compact, Heavy Reinforced Cast Steel Base, with Skids and Pinion Bearing Housing Integral.

THE NEW "OILWELL" MODEL 34 • 27½" STRAIGHT OILBATH ROTARY is the last word in rotary design. Its many new features for safe high speed operation will make it the choice of both drillers and operators.

"OILWELL" MODEL 34 • 27½" OILBATH ROTARY SPECIFICATIONS:

Compact, heavy reinforced cast steel base, with skids and pinion bearing housing integral; large capacity oil reservoir with return system, providing oilbath and splash lubrication for all bearings and gears; fully enclosed, oil-tight tapered roller bearing unit pinion shaft assembly with overhung sprocket; forged alloy steel, machine cut, heat-treated spiral bevel gear and pinion; heavy ball thrust table bearing with heat-treated high Brinell alloy steel ball races; fully enclosed and dust proof table with strong table guard; base capacity—250 tons, recommended drilling load—12,000-ft., 4½" drill pipe; table opening 27½"; maximum operating speed 250 R.P.M.

"OILWELL" ROLLER DRIVE BUSHING

Recommended for use with "OILWELL" Rotaries to prevent binding of Grief Stem by allowing free movement through table, resulting in a steady drive and accurate control of the weight on the bit. "OILWELL" Roller Drive Bushings can be furnished for any make of Rotary. Regularly offered for 6, 5¼, 4¼ and 4" Square Grief Stems. Other sizes upon request. Ask for leaflet No. 21.

"OILWELL"

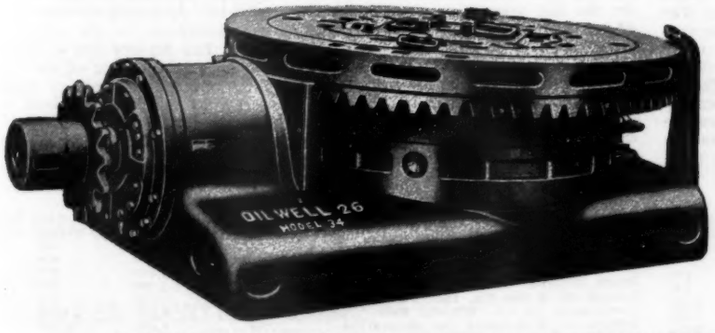
by "Oilwell" ADVANTAGES

For the deepest drilling

- ✓ **Fully Enclosed, Oil-Tight Roller Bearing Unit Pinion Shaft Assembly with Overhung Sprocket.**
- ✓ **Heavy Ball Thrust Table Bearing with Heat-Treated High Brinnell Alloy Steel Ball Races.**
- ✓ **Forged Steel, Machine Cut, Heat-Treated Gear Train.**

THE NEW "OILWELL" MODEL 34 • 26" MAKE-AND-BREAK ROTARY

This new design rotary is a modernization of the already popular "OILWELL" Make-and-Break type of rotary.



● **"OILWELL" MODEL 34 • 26" MAKE-AND-BREAK ROTARY**
SPECIFICATIONS: Compact, heavy reinforced cast steel base, with skids and pinion bearing housing integral; fully enclosed, oil-tight tapered roller bearing unit pinion shaft assembly with overhung sprocket; forged steel, machine cut, heat-treated bevel gear and pinion; heavy ball thrust table bearing with heat-treated high Brinell alloy steel ball races; semi-enclosed gravity feed lubricating system with main race oilbath; base capacity 250 tons, recommended drilling load—12,000 ft., 4-½" drill pipe; table opening 26"; maximum operating speed—200 R.P.M.

Visit "Oilwell's"
72 Years of Progress
Machinery Exhibit
at "Oilwell's" Headquarters
2001 North Lamar Street
When Visiting Dallas

A. P. I. MEETING

NOV. 12 - 15 INC.

U.S. STEEL

OIL WELL SUPPLY CO.
SUBSIDIARY OF UNITED STATES STEEL CORPORATION
Branch Stores in all Oil Fields

2806

"OILWELL"

Mid-Continent Refiners Decrease November Crude Runs to Stills

By GEORGE WEBER

Estimated daily crude runs for refiners in the Mid-Continent totaled 496,340 bbls. for November. This represents a decrease of 4,415 bbls. daily from the October figure. A sharper decline could occur during November than estimated here due to curtailing operations in East Texas. Curbing runs 7,400 bbls. daily from the mark of the month preceding, Oklahoma shows the most substantial decrease, processing but 128,690 bbls. Crowding this daily figure is the total of East Texas, which continues its upward swing in operations with an increase of 9,430 bbls. Kansas and Southwest Texas, with negligible increases, are the only other districts showing a November gain. The causes of the inconsistency of this monthly trend when a much greater decrease should be expected, may be attributed to several reasons. The major factor is the increased leniency shown by the refinery boards of review under Secretary Ickes, in granting increases in refinery quotas. For November, more than 80 per cent of the requests on increased allocation for which decisions were rendered, were granted. This represents a total increase of nearly 10 per cent in crude runs in the nation. Furthermore the seasonal decrease in demand for gasoline occurs much later and in a lesser degree than that in the northern and eastern sections of the United States. Gasoline consumption figures for 1934 have exceeded those of 1933 in the past few months, showing a more favorable absorption of this production.

The curtailment of crude runs in Oklahoma is reflected generally throughout the state, few increases being reported. The Continental Oil Co. refinery at Ponca City will operate on a schedule of 12,000 bbls. of crude per days. This is 4,000 bbls. less than the company's October figures. The Barnsdall Refineries, Inc., have closed the refinery at Okmulgee and are increasing their operating programs by 500 bbls. at Barnsdall and 1,000 bbls. at Wichita, Kans. The 3,000-bbl. Wynnewood refinery of the Texas Pacific Coal & Oil Co. has also been closed. As the principal product of this plant is asphalt the winter slump in road building is given as the cause of the shutdown.

EAST TEXAS

No seasonal or national trend can be applied to the growing tide of refining in the East Texas Field. Operating habits in this section are so flexible that predictions and estimations for as much as a month are of doubtful value. The gain of nearly 10,000 bbls. for the estimate in November is shared by many plants and reveals an increase in capacity in a large per cent of them. The success of the buying program just drawn up and approved, depends entirely upon the retrenching of refiners to their gasoline allocations which approximates the processing of 75,000 bbls. of crude daily. Excluding 17,400 bbls. under "East Texas" in this survey which are not refined in East Texas proper, the remaining figure will need to be cut to about 60 per cent of the present amount.

The allocated production of gasoline in the East Texas Field is 700,000 bbls. At the average crude yield in this district of 37 per cent gasoline, the allowed amount of crude to be refined during the month is 1,900,000 bbls., or 63,300 bbls. per day. East Texas refiners have been running more than 100,000 bbls. to stills for the last several months. While the 40 per cent cut may not be reduced within the month, several refiners in the area have indicated that they will cut their operations to a fraction of the estimated amount. Approximately a quarter of them have signed the new buying agreement.

In comparison with figures of previous years, the November total is the greatest since 1930. This is the fourth month of 1934 which has shown a daily crude total of about a half million. Variation during this four-month period has been slight, revealing a sustained program of high operating estimates for refiners in the Mid-Continent.

NORTH TEXAS

The Phoenix Refining Co. has purchased the West Dallas plant of the Oriental Refining Co. and will close its 1,000-bbl. refinery near there and transfer operations to the newly acquired plant. The Empire Oil & Refining Co. announced the closing of the Gainesville, Tex., refinery as soon as crude oil in storage at the plant has been processed. The remaining crude stocks will permit an average of 1,500 bbls. daily throughput during November.

Mid-Continent Refinery Operations

Average Daily Crude Runs (Barrels)
(Based on estimates compiled first of each month by The Oil and Gas Journal)

	1929	1930	1931	1932	1933	1934
January	508,550	535,460	478,795	405,910	399,405	448,360
February	506,800	519,355	470,125	411,280	407,125	456,619
March	514,950	531,500	449,634	401,155	423,445	465,680
April	530,530	555,250	497,391	419,391	441,000	458,220
May	577,500	574,300	510,540	436,160	470,460	457,165
June	583,030	572,250	567,915	440,765	479,987	459,908
July	565,800	548,475	588,840	433,255	525,845	477,012
August	555,250	526,400	590,545	427,710	518,510	501,750
September	552,300	498,710	588,105	430,430	526,749	499,830
October	544,720	518,800	472,190	401,995	495,756	500,755
November	545,473	506,700	480,440	408,180	481,335	496,340
December	540,630	478,360	456,525	416,275	434,275	.....

Operations by Refinery Districts

	Nov. dly. crude capacity	Nov. dly. crude runs	Oct dly. crude runs	Nov. daily decrease
Arkansas	41,550	20,750	22,150	1,400
East Texas	221,970	118,790	109,360	*9,430
Kansas	177,950	94,850	94,750	*100
North Central Texas	107,500	36,680	37,705	1,025
North Louisiana	55,450	29,100	33,050	3,950
Oklahoma	289,500	128,690	136,090	7,400
Southwest Texas	26,600	14,160	13,830	*330
West Texas and Panhandle.	105,475	53,320	53,820	500
Total	1,025,995	496,340	500,755	4,415

*Increase.

OKLAHOMA

Company and location—	Daily capacity	Aver. daily runs— November	October
Anderson-Prichard Oil Corp., Cyril	6,000	3,900	3,930
Altitude Petroleum Corp. (J. H. Peacock Refining Co.), Oklahoma City	3,000	(*)	(*)
Associated Petroleum Corp., Allen	3,000	(*)	(*)
Barnsdall Refineries, Inc., Barnsdall	6,000	4,000	3,500
Barnsdall Refineries, Inc., Okmulgee	10,000	(*)	2,500
Bell Oil & Gas Co., Grandfield	4,500	2,000	2,000
Black Gold Refining Co., Oklahoma City	2,500	1,500	1,500
Century Petroleum Corp., Oklahoma City	2,500	(*)	(*)
Champlin Refining Co., Enid	16,000	6,000	6,000
Continental Oil Co., Ponca City	30,000	12,000	16,000
Crescent Refining Co., Holdenville	1,000	(*)	(*)
Cushing Refining & Gasoline Co., Blackwell	1,700	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	4,500	3,000	2,500
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	5,000	2,500	2,500
Empire Oil & Refining Co., Okmulgee	4,000	1,900	2,100
Empire Oil & Refining Co., Ponca City	13,000	6,300	6,450
Gem Refining Co., Oklahoma City	1,000	(*)	(*)
Globe Oil & Refining Co., Blackwell	7,500	6,000	6,000
Government Refining Co., No. 1, Oklahoma City	1,000	(*)	(*)
Government Refining Co., No. 2, Seminole	800	(*)	(*)
Government Refining Co., No. 3, Oklahoma City	3,500	100	100
Hanger Refining Co., Oklahoma City	1,000	110	50
Johnson Oil Refining Co., Cleveland	6,000	4,500	4,400
Major Petroleum Products Co., Oklahoma City	2,000	750	500
Marathon Oil Co., Bristow	5,000	2,000	2,000
Mid-Continent Petroleum Corp., West Tulsa	40,000	18,000	18,000
Monarch Refining Co., Oklahoma City	1,000	300	(*)
Phillips Petroleum Co., Okmulgee	6,000	4,000	4,660
Producers & Refiners Corp., West Tulsa	6,000	(*)	(*)
Pure Oil Co., Muskogee	9,000	6,000	4,200
Rock Island Refining Co., Beckett	6,000	3,200	3,200
Sinclair Refining Co., Sand Springs	8,000	2,600	3,500
Sun Oil Co., Yale	5,000	2,000	2,000
Sunray Oil Co. (C. E. Wright, receiver), Allen	7,000	2,000	2,000
Texas Co., West Tulsa	15,000	12,000	12,000
Texas Pacific Coal & Oil Co., Wynnewood	3,000	(*)	600
Tide Water Oil Co., Drumright	15,000	7,000	9,000
Triangle Producing & Refining Co., Oklahoma City	1,000	330	500
Wilcox Oil & Gas Co., Bristow	5,000	2,000	2,500
Wirt Franklin Petroleum Corp., Ardmore	4,000	1,500	1,600
Yale Oil Corp., Yale	2,000	(*)	(*)
Paramount Refining Co., Oklahoma City	2,000	700	700
Total	289,500	128,690	136,090

*Shut down.

NORTH CENTRAL TEXAS

Company and location—	Daily capacity	Aver. daily runs— November	October
All State Refining Co., Thrall	2,300	150	150
Archer Refining Co., Megargel	1,000	400	350
Atlantic, Pacific & Gulf Refining Co., Wichita Falls	5,000	100	100
Baird Refining Co., Baird	1,400	300	300
Canyon Oil & Gas Co., Inc., The, Cisco	500	(*)	(*)
Continental Oil Co., Wichita Falls	6,000	4,000	4,000
Empire Oil & Refining Co., Gainesville	5,000	1,500	3,000
Exchange Petroleum Corp., Albany	500	200	200
Falls Refining Co., Wichita Falls	2,000	180	275
Gratex Refining & Fuel Co., Graham	500	170	280
Gulf Refining Co., Fort Worth	10,000	5,500	4,000
Gulf Refining Co., Sweetwater	5,000	2,000	4,500
Haskell Oil Refining Co., Breckenridge	200	(*)	(*)
Jacksboro Refining Co., Jacksboro	50	50	50
LaSalle Petroleum Co., Burkburnett	2,500	500	190
Magnolia Petroleum Co., Fort Worth, No. 1	12,000	4,000	4,000
Magnolia Petroleum Co., Fort Worth, No. 2	6,000	(*)	(*)
Marathon Oil Co., Fort Worth	5,000	4,000	3,000
Moutray Refining Co., Hawley	600	270	250
Meunster Refining Co., Meunster	300	150	150
New Deal Refining Co., Abilene	300	(*)	(*)
Nolting Refining Co., Sweetwater	1,000	180	180
Margold Refining Co., West Olney	400	200	200
Olney Oil & Refining Co., North Olney	3,000	1,500	1,800
Omega Refining Co., Brownwood	200	(*)	(*)
Panhandle Refining Co., Wichita Falls	5,000	2,000	2,500
Paragon Refining Co., Leuders	400	150	150
Pentex Refining Co., Echo	400	(*)	(*)
Petroleum Oil Interests, Inc., Brownwood	1,000	200	200
Pilot Point Refining Co., Pilot Point	500	100	100
Sinclair Refining Co., Fort Worth	5,000	1,800	1,800
Southtex Refining Co., Trent	250	150	150
Southland Refining Co., Olney	1,000	(*)	(*)
Starlight Refining Co., Inc., Ballinger	300	200	200
Star Refining & Producing Co., Fort Worth	1,200	500	520
Superior Refining Co., Tiffin	800	(*)	(*)
Taylor Refining Co., Taylor	6,000	800	500
Taxman Refining Co., Wichita Falls	3,500	(*)	(*)
Texas Pacific Coal & Oil Co., Fort Worth	3,000	2,000	2,000
Texas Pacific Coal & Oil Co., Caddo	1,000	600	600
Tucker Refining Co., Wichita Falls	200	130	125
Waggoner Refining Co., Electra	6,000	2,000	1,185
Wat. Refining Co., Brownwood	200	200	200
Total	107,500	36,680	37,705

*Shut down.

(Continued on Next Page)

Keep the gumbugs out of your cracked gasoline

Unsaturated hydrocarbon molecules in the gasoline gang up with oxygen molecules from the air and turn into gumbugs — unless the chemical cop is on the job

The chemical cop is Universal Liquid Inhibitor He paralyzes the reaching fingers of the hydrocarbons so they can't grab the oxygen molecules and form gumbugs

The unsaturated hydrocarbons carry the antiknock value The gumbugs carry nothing but gum—and trouble

The chemical cop earns many times what you pay him

He saves acid expense

He saves treating losses

He keeps the antiknock value all in and the gum all out

Put the chemical cop on duty to protect your gasoline

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

Copyright 1934, Universal Oil Products Co

FOR 71 YEARS MAKERS OF UNIFORMLY DEPENDABLE HEADED AND THREADED PRODUCTS OF EVERY KIND

Bolts and nuts in all standard and special shapes, sizes, alloys and finishes. Standard and special rivets of all kinds. Wire rope clips. Turnbuckles. Automotive and railroad special items. Headed and threaded products for every use. Your specialities are our specialty.

UPSON NUT DIVISION
REPUBLIC STEEL CORPORATION
CLEVELAND, OHIO

Mid-Continent Refiners Decrease November Crude Runs

(Continued from Preceding Page)

EAST TEXAS

Company and location—	Daily capacity	Aver. daily runs November	Aver. daily runs October
Acme Refining Co., Gladewater	700	650	700
Adams Refining Co., Big Sandy	1,000	720	770
Archer Refining Co., Gladewater	1,000	(*)	(*)
Arrow Refining & Producing Co., Overton	5,000	2,580	2,800
Artex Refining Co., Arp	1,600	440	1,300
Aviation Refining Co., Kilgore	200	(*)	(*)
Bartlett Refining Co., Kilgore	200	(*)	(*)
Beacon Oil & Refining Co., Henderson	4,500	480	2,500
Blue Ridge Oil Co., Gladewater	1,500	(*)	1,320
Blackstone Refining Co., Overton	3,000	(*)	2,000
Bradley Refining Co., Kilgore	1,200	1,200	1,200
Calcul Refining Co., Gladewater	600	300	600
Carnation Refiners Corp., Gladewater	1,100	1,280	1,100
Century Refining Co., Friars Switch	2,300	2,300	2,000
Chief Refining Co., Gladewater	1,500	1,110	1,150
Culver Refining Co., Gladewater	2,100	3,700	2,100
Danciger Refineries, Inc., Longview	10,000	(*)	2,000
East Texas Refining Co., Longview	10,000	7,500	2,000
Foshee Refining Co., Gladewater	1,500	(*)	350
Friar Topping & Refining Co., Friars Switch	1,500	1,380	1,050
Gilliland Refining Co., Gladewater	3,500	3,500	3,350
Gilmer Refining Co., Gladewater	500	(*)	(*)
Gladetex Refining Co., Gladewater	700	(*)	700
Godlin Refining Co., Gladewater	850	(*)	(*)
Goodson Refining Co., Gladewater	500	130	(*)
Humble Oil & Refining Co., Neches	5,000	1,100	1,300
Hunter & Knox Refining Co., Reeds Switch	100	(*)	(*)
Ideal Refining Co., Gladewater	750	50	100
Illinois Refining Co., Kilgore	570	1,290	570
Imperial Refining Co., Kilgore	2,000	(*)	540
Johnson Refining Co., Kilgore, No. 1	1,400	950	1,350
Kent Refining Co., Angus	4,000	(*)	(*)
Keystone Refining Co., Gladewater	2,300	1,260	2,300
Kilgore Reclamation Co., Kilgore	2,000	300	310
Kilgore Refining Co., Kilgore	3,000	(*)	1,200
Kil-Tex Refining Co., Kilgore	500	270	500
L. & G. Refining Co., Gladewater	1,100	1,040	330
Lake Refining Co., Gladewater	2,000	(*)	1,800
Lapren Refining Co., Kilgore	1,500	(*)	1,420
Lindsey Refining Co., Gladewater	2,500	2,250	2,200
Locke Refining Co., No. 1, Gladewater	1,500	1,740	1,500
Locke Refining Co., No. 2, Gladewater	1,500	1,460	1,500
London Topping & Refining Co., Overton	250	370	240
Lone Star Refining Co., Gladewater	2,700	2,540	2,700
Longregg Refining Co., Kilgore	2,000	510	70
Lotus Refining Co., Gladewater	1,500	1,400	1,200
Magnolia Petroleum Co., Corsicana	5,000	3,000	3,000
Master Petroleum Co., Waco	1,000	400	400
McMurray Refining Co., Arp	4,000	3,500	2,000
Minerva Refining Co., Minerva	2,000	200	200
Model Oil & Refining Co., Reeds Switch	1,400	1,350	530
Ocean Refining Co., Kilgore	3,000	2,180	2,740
Oil Refineries, Inc., Overton	4,000	1,350	2,450
O. K. Topping Plant, Kilgore	300	(*)	(*)
Phoenix Refining Co., Dallas	5,000	(*)	(*)
Outdoor Refining Co., Kilgore	200	820	190
Overton Refining Co., Overton	3,000	(*)	1,500
Pacific Refining Co., Reeds Switch	1,800	1,760	1,740
Panama Refining Co., Kilgore	3,500	3,430	2,400
Pelican Refining Co., No. 1, Gladewater	500	850	(*)
Pelican Refining Co., No. 2, Gladewater	600	820	580
Pennant Refining Co., Kilgore	1,200	1,240	1,000
Pentex Refining Co., Gladewater	500	200	250
Petroleum Processing Co., Friars Switch	3,600	3,580	(*)
Phoenix Refining Co., Inc., Dallas	1,000	(*)	500
Pine Refining Co., Camp's Switch	3,700	3,440	1,050
Price Refining Co., Gladewater	100	20	20
Producers Oil Refining Co., Reeds Switch	2,700	2,690	1,670
Recla Refining Co., Turnertown	200	(*)	(*)
Rig Topping & Refining Co., Kilgore	200	(*)	(*)
Roco Refining Co., Kilgore	2,400	2,380	2,080
Shoreline Refining Co., Kilgore	2,700	2,670	2,680
Simms Oil Co., West Dallas	4,000	(*)	1,500
Sinclair Refining Co., Camps Switch	5,000	1,700	1,500
Southport Refining Co., Kilgore	3,300	3,270	2,230
Staley, J. I., Refinery, Friars Switch	6,000	(*)	(*)
Supreme Refining Co., Gladewater	1,000	480	550
Texanna Refining Co., Kilgore	2,000	(*)	(*)
Texas Co., Dallas	16,000	10,000	10,000
Texas Oil Producers Co., Gladewater	2,000	1,900	1,470
Texas State Refining Co., No. 1, Kilgore	1,000	910	820
Trio Refining Corp., Arp	1,500	1,030	920
Tyler, Texas Oil & Refining Co., Tyler	15,000	7,200	2,100
Tyreco Refining Co., No. 1, Arp	2,500	1,870	2,450
Tyreco Refining Co., No. 2, Overton	3,000	2,480	2,480
Union Refining Co., Camps Switch	3,000	2,940	2,560
Unit Refining Co., Kilgore	200	(*)	(*)
Upshur Refining Co., Gladewater	1,000	690	500
Utah Refining Co., Kilgore	2,500	2,480	2,100
Walrip & Stevens Refining Co., Omega	1,000	(*)	(*)
Ward, Walrip & Stevens Refining Co., Gladewater	800	760	(*)
Washington Refining Co., Kilgore	1,000	120	320
Wichita Refining Co., Gladewater	750	(*)	(*)
Wolfe Refining Co., Kilgore	1,000	(*)	(*)
Total	221,970	118,790	109,360

*Shut down.

KANSAS

Company and location—	Daily capacity	Aver. daily runs November	Aver. daily runs October
Barnsdall Refineries, Inc., Wichita	4,000	3,000	2,000
Derby Oil Co., Wichita	8,000	4,500	4,500
Dickey Refining Co., McPherson	5,000	1,000	1,000
Eldorado Refining Co., Eldorado	5,000	3,500	3,500
Falcon Refining Co., Inc., Great Bend	700	500	500
Globe Oil & Refining Co., McPherson	10,000	7,500	7,500
Golden Rule Refining Co., Wichita	1,500	(*)	(*)
Kanotex Refining Co., Arkansas City	12,000	3,500	3,500
Kansas Gas & Gasoline Co., Winfield	500	100	100
Kreuger Refining Co., Laton	150	50	50
National Refining Co., Coffeyville	6,500	4,500	4,500
Petroleum Products Co., Chanute	1,000	1,000	1,000
Phillips Petroleum Co., Kansas City	15,000	10,800	10,000
Security Petroleum Co., Chase	3,100	(*)	(*)
Shell Petroleum Corp., Arkansas City	20,000	8,000	11,000
Sinclair Refining Co., Coffeyville	12,000	6,000	6,000
Sinclair Refining Co., Argentine	9,500	5,400	5,400
Skelly Oil Co., Eldorado	23,000	15,000	13,500
Standard Oil Co. of Kansas, Neodesha	20,000	5,000	5,000
United Oil & Refining Co., Hutchinson	1,500	(*)	(*)
Vickers Petroleum Co., Potwin	3,500	2,000	2,200
White Eagle Refining Co., Augusta	16,000	13,500	13,500
Total	177,950	94,850	94,750

*Shut down.

WEST TEXAS AND PANHANDLE

Company and location—	Daily capacity	Aver. daily runs November	Aver. daily runs October
Active Oil Co., Arno	1,500	(*)	(*)
Aero Refining Co., Pecos	225	200	200
Coltex Refining Co., Colorado	12,500	6,000	6,000
Concho Refining Co., San Angelo	250	120	120
Cosden Oil Co., Big Spring	12,500	5,000	7,000
Danciger Refineries, Inc., Pampa	6,500	6,000	5,000
Howard County Refining Co., Big Spring	1,500	300	300
McNutt Refining Co., El Paso	2,000	500	500
Panhandle Refining Co., Kings Mill	2,000	1,400	1,400
Paramount Refining Co., San Angelo	2,000	(*)	(*)
Pasotex Refining Co., El Paso	14,000	5,500	5,500
Phillips Petroleum Co., Borger	30,000	21,000	21,000
Shamrock Oil & Gas Co., Sunray	2,000	1,500	1,200
Shamrock Oil & Gas Co., Meldavis	1,500	1,100	900
Sinclair Refining Co., El Paso	2,500	600	600
Texas Co., El Paso	2,000	700	700
Texas Co., Amarillo	4,000	3,000	3,000
West Texas Refining Co., Pecos City	6,000	(*)	(*)
Wickett Petroleum Co., Wickett	2,500	400	400
Total	105,475	53,320	52,320

*Shut down.

SOUTHWEST TEXAS

Company and location—	Daily capacity	Aver. daily runs November	Aver. daily runs October
Amsco Refining Co., Mirando City	2,000	800	800
Bee Oil & Refining Co., Pettus	1,000	500	570
Capital Refining Co., Luling	2,500	(*)	(*)
Chapa Refining Co., Laredo	100	50	50
Citizens Refining Co., Luling	200	50	50
Humble Oil & Refining Co., San Antonio	5,000	2,900	2,500
Magnolia Petroleum Co., Luling	7,000	4,800	4,800
Pettus Refining Co., Pettus	1,000	400	400
Phoenix Refining Co., San Antonio	500	400	400
Pioneer Oil & Refining Co., Somerset	2,000	800	800
Price Refining Co., San Antonio	500	(*)	(*)
Rado Refining & Producing Co., McAllen	500	200	200
Texas Co., San Antonio	3,000	3,000	3,000
Texas Petroleum Products Co., Somerset	1,500	250	250
Total	26,600	14,160	13,830

*Shut down.

NORTH LOUISIANA

Company and location—	Daily capacity	Aver. daily runs November	Aver. daily runs October
Acme Refining Corp., Monroe	100	50	50
Bayou State Refining Co., Houston	750	100	150
Griswold Refining Co., Shreveport	1,000	700	200
Louisiana Oil Refining Co., Shreveport, Bossier	30,000	16,300	20,000
Pelican Refining Co., Converse	100	50	50
Shoreline Oil Co., Lewis	1,000	900	600
Spar an Refining Co., Shreveport	12,000	10,000	10,000
Stanolind Oil & Gas Co., Vivian	3,500	2,000	2,000
Texas Co., Shreveport	7,000	(*)	(*)
Total	55,450	29,100	33,050

*Shut down.

ARKANSAS

Company and location—	Daily capacity	Aver. daily runs November	Aver. daily runs October
Berry Asphalt Co., Waterloo	2,000	900	900
Henry H. Cross Co., Smackover	9,000	3,000	3,000
Lion Oil Refining Co., El Dorado	12,000	6,000	6,500
Macmillan Petroleum Products Co., Norphlet	2,300	2,300	2,300
Ouachita Valley Refining Co., El Dorado	2,500	2,000	2,000
Root Refining Co., El Dorado	10,000	5,300	5,000
Simms Oil Co., Smackover	3,000	1,000	2,200
Stephens Refining Co., Stephens	750	250	250
Total	41,550	20,750	22,150

Production Engineers Desired by Argentine

The Argentine Government Oil Fields Commission in the United States is desirous of contracting for the services of three production engineers, according to the following letter addressed to The Oil and Gas Journal by Oscar P. Wegner of the commission which is located at 80 Broad Street, New York, N. Y.

"I have received instructions from my home office in Buenos Aires, Argentina, to contract the services of three production engineers, to work in the development of our oil fields in the Argentine, and I am taking the liberty of addressing this letter to you, requesting your assistance in obtaining applications from engineers who may be unemployed at the present time, which assistance will be very valuable due to the good connections which The Oil and Gas Journal has with all the petroleum industry.

"I am quoting below the conditions required for the employment of these engineers:

"Must have technical preparation obtained in universities of the United States of America, being specialized in production work. Must have no connection whatsoever with oil companies now operating in the Argentine Republic (Standard Oil Co. of New Jersey, Royal Dutch-Shell and Anglo-Persian Oil Co.), and in the event that they at some time may have been employed by them, they should have been working for independent oil companies for the last two years at least. Must have the largest possible practice in pumping, gas lift, surgency and intermitent surgency, having wide knowledge of the different apparatus and systems used for gas lift, including Maxiflow and Jat, and also in gas repressuring into the oil sand.

"The services would be contracted for one year, at $300 per month, and $1,000 bonus at the end of the one-year contract. The contract could be made for two years, or extended to that term, in which case the salary would be the same, but the bonus will only be $500 at the end of the two years' contract, instead of the $1,000 mentioned before.

"The applicants must be preferably single, but married men would also be considered, providing they will not require any more accommodations or benefits than those given to the single ones.

"The places where they are liable to be sent to in Argentina will be: Comodoro Rivadavia, four days' steamer south of Buenos Aires; Plaza Huincul, 900 miles southwest of Buenos Aires and near the Andes; Mendoza, 500 miles west of Buenos Aires near the Andes, and/or Salta, near the Bolivian border.

"I expect to sail for London, England, on Friday, November 9, where I will remain 10 days, and will therefore be back in New York during the first week in December. In case it is possible for you to help me on the above mentioned subject, and if you are able to find applicants for the positions offered, it would be convenient to ask them to prepare a complete list of the studies which they have made, proof of their technical preparation, and a list of the positions which they have occupied in different companies, kind of work performed, and places, indicating at the same time details of how we must address our correspondence to them in the event that we desire to enter into some definite arrangement.

"All applications arriving in New York, on or about the first week in December, will be sent to Buenos Aires, and we will possibly obtain their reply before New Years."

The Oil and Gas Journal

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published Weekly by

THE PETROLEUM PUBLISHING COMPANY

114-16 West Second Street, Tulsa, Oklahoma

P. C. LAUINGER, President
JOHN M. EGAN, General Manager
JAMES McINTYRE, Editor
ANDREW M. ROWLEY, Managing Editor
W. T. ANDERSON, Associate Editor
C. O. WILLSON, Refinery Editor

Established 1910 by PATRICK C. BOYLE

E. KLAPPENBACH, Advertising Manager
L. G. E. BIGNELL, Petroleum Engr. Editor
C. K. FRANCIS, Ph.D., Technical Editor
W. T. ZIEGENHAIN, Associate Editor
THOMAS F. SMILEY, Associate Editor
M. F. BALDWIN, Circulation Manager

Branch Editorial Offices

CANADA, Victor Lauriston
DENVER, Tolbert R. Ingram
FT. WORTH, L. E. Bredberg
HOUSTON, Neil Williams
CHICAGO
LOS ANGELES, L. P. Stockman
NEW YORK, C. O. Willson
MICHIGAN, Paul A. Elliott
OIL CITY, Robert C. Conine
SHREVEPORT, J. R. Crumpton
TOLEDO, George A. Whitney
WASHINGTON, Hugh D. Mallon
PITTSBURGH

Branch Advertising Offices

NEW YORK CITY, C. L. Cain
CHICAGO, C. R. Farmer
CLEVELAND, Howard Markt
HOUSTON, Paul T. Putnam
LOS ANGELES, J. H. Tinkham

(For representatives' complete addresses see contents page)

Member, Audit Bureau of Circulations

Still To Be Shown

Washington continues optimistic over the efforts of the administration to check illegal production in East Texas but the industry, after giving all due credit for what is being attempted, is not yet convinced that the improvement will be permanent.

Granted that "hot" oil production has been reduced from 130,000 barrels daily to 35,000 or 40,000 barrels a day, that is still far too much to be minimized. A year ago the excess production was estimated at 27,000 barrels a day and conditions were getting worse rather than better.

Checking interstate rail movements is evidently not enough. Truck transportation is still being regarded as a matter of intrastate movement to be regulated by the State Railroad Commission which apparently cannot require tenders on products until Christmas.

Wherever the loophole may be it seems large enough to get away with some 35,000 or 40,000 barrels a day of "hot" crude and while this remains unchecked it is too early to be optimistic.

The condition of the gasoline market confirms this view. It does not reflect the expectations at Washington.

This uncertainty in the gasoline market may be the effect of that 35,000 or 40,000 barrels of "hot" oil still being produced or it may reflect the customary "take-a-chance" attitude of East Texas when an injunction suit clouds enforcement of the law.

The expectation that the Federal Tender Board's power would be challenged in the courts has been fulfilled. An early date has been set for hearing but in the meantime East Texas may be expected to make the most of its opportunity as usual.

Resumption of the gasoline buying program, however revised, is not likely to be much more effective than before. It depends entirely on whether "hot" oil production can be checked. If it cannot be, no one can expect the buyers to continue the buying program indefinitely.

If "hot" oil production can be halted the surplus gasoline will soon be exhausted and there will be no need for a buying program. The sole purpose of the buying program is to remove the accumulated surplus overhanging the market. If that surplus is going to be perpetuated, as it was before, by continued production of "hot" oil, there can be no hope of removing distress gasoline and the buying program might as well be abandoned before it is again begun.

As the situation stands the Federal Tender Board is now controlling interstate rail movement but there is still from 35,000 to 40,000 barrels daily of "hot" oil being produced. What more can the Federal authorities do to shut off that flow, if anything? These injunction suits also revive the question whether it can do what it is attempting.

The Department of Justice is beginning prosecutions for making false returns but it remains to be seen what chance there may be of results that will affect illegal production activity, and when.

Meanwhile a Washington critic is asking impatiently why the industry does not halt the gasoline price wars "now that the Federal administration has stopped 'hot' oil."

For the very sufficient reason that the administration has not yet stopped "hot" oil. As everyone knows by this time there is a very great difference between an official proclamation of purpose at Washington and the accomplishment of actual fact throughout the country.

Men who read that "hot" oil has been stopped and find that gasoline can still be had at distress prices in East Texas are forced to believe the fact and discount the theory.

The industry would be glad to see "hot" oil stopped but, profiting by experience, it postpones its rejoicing until it can see it stopped.

Price-Cutting Margins

The spreading of gasoline price cutting wars has directed attention anew to the part that fixed margins play in these disturbances.

When dealers use excessive margins to cut prices in the effort to gain a competitor's business the competitor is forced to follow suit and presently the whole market comes tumbling down about everybody, wholesaler and retailer alike, and back to the refiner and the producer.

It is again being suggested that if margins were set on a sliding scale whereby the dealer would share the loss when he makes a cut, instead of possibly for a time, gaining volume and money through his fixed margin, on each gallon sold, he would be less ready to initiate a price cutting war that would hit his own pocket.

Under the old system of guaranteed dealer margins the retailer is not made a partner within the oil industry but a peddler. If he were made to feel that he is to share the ups and downs of the oil business he would soon realize that he would do more for himself by becoming a stabilizing factor and cease to be a potential disturber.

The existing system sets the dealer's eye on volume rather than profit, per gallon. The more gallons the more money, therefore he shaves the price to increase his gallonage with the disastrous consequences to the industry that follow.

If he were put on a sliding margin, so that with each decline in price he would suffer a proportionate loss in his margin, per gallon, instead of passing it up to his supplier, he would be as eager to maintain the price as he now is to reduce it.

It would place the emphasis in his mind where it properly belongs in the mind of any man in business, on whether business is being done at a profit or at a loss, and not solely on getting rid of quantity.

This is where the emphasis is placed in every other business but in the oil business excessive dealer margins have simply turned the picture around, making volume everything and disregarding profit.

So long as the consumption was continually increasing it was not noticed so much. More volume then sometimes meant new business. Nowadays, with consumption at or near a saturation point, more volume can be had, under existing conditions, only by taking it from some one else, and usually by cutting prices.

Doubtless some dealers will protest loudly against any change which would make them share the effect of their price cutting tactics. They will refuse to see that it must be for their advantage as well as that of the whole industry that price cutting is eradicated, that is, if they have any other ability to be in the business than price cutting. If they can only stay in business by price cutting they have no business in business.

HOW MANY TOOLS DOES IT TAKE TO MAKE A JOINT ?

JUST 1

When You Use DRESSER Couplings

A DRESSER RATCHET WRENCH is simple, easy and speedy to operate. No other tool is needed to pull up the bolts on a Dresser Coupling. This one tool completely eliminates the need for noisy, expensive, complicated jointing equipment that involves heat or power.

With Dresser Ratchet Wrenches and Dresser Couplings, unskilled labor can make permanently, *absolutely* tight joints in minimum time. Manual operation of a Dresser Wrench requires such little effort and is so exceptionally fast that the resulting tightness of the joints never fails to impress the engineer who has experienced difficulties with other types of construction.

S. R. DRESSER MFG. COMPANY
Bradford, Pa.

In Canada: Dresser Mfg. Company, Ltd.
32 Front St., West, Toronto, Ontario

Dresser Products: STEEL COUPLINGS · CAST COUPLINGS · STEEL SLEEVES · BELL JOINT CLAMPS · COLLAR LEAK CLAMPS · POROUS WELD CLAMPS · SPLIT REPAIR SLEEVES · EXPANSION JOINTS · REDUCING COUPLINGS · INSULATING COUPLINGS · RATCHET WRENCHES · *and many other modern accessories for pipe.*

NEWS FROM FOREIGN LANDS

RUMANIA

Shipments of crude oil and finished products from Rumania showed a large increase in July over June and over July of last year. The July total was 616,300 tons, according to a government report, 546,600 tons in June and 505,200 tons in July, 1933.

Italy continues to lead in the purchase of Rumanian products, its imports being almost 100 per cent greater than any other country. The principal exports from Rumania in July were as follows (data in tons): Italy, 110,600; Egypt, 64,800; Great Britain, 51,200; France, 48,700; Germany, 39,800; Belgium, 37,000; Austria, 36,400, and Holland, 20,000.

A well-supported effort is again being made in Rumanian oil circles to have the government reduce the high taxes which apply to crude petroleum and its products. Proponents of the lower taxes are pointing to the losses in operations so far this year. It is also contended that the entry of Iraq crude oil into markets in which Rumanian crude oil and refinery products are sold complicates this situation and necessitates immediate action. The taxes applying to Iraq crude oil, including government royalty, are much less than in the case of Rumania and it is feared that the new supply will weaken the position of Rumania in European markets.

It is pointed out that the gross value of crude oil and refinery products in Rumania last year as sold to foreign and domestic customers, was approximately 8,700,000.000 lei, and of this total almost 4,000,000,000 lei was paid out in taxes. The taxes include a transport tax, export tax, communal duties, turnover tax and a number of other special taxes applying either to the products themselves or to the producing, transporting or refining operations.

The Rumanian market most of the year has been faced with declining price trends so that the return on gasoline for instance has been below last year. The oil industry also has suffered due to the unsettled currency situation.

U. S. S. R.

Official reports from the U.S.S.R. are stressing the importance of two completions in the Lok-Batan Field of the Baku district where several gusher wells have been completed over the past year and a half. The latest important completion is the No. 54 which is showing a production of approximately 5,000 bbls. daily from a depth of 3,330 feet. This well is producing from a new horizon which is the eighth for the field.

The second important completion is the No. 182 which has a reported production of 2,000 bbls. daily from a depth of 2,100 feet. This is the first well to be drilled on the slope of the Lok-Batan formation. It is believed that it opens up for future development a large producing area.

Although August consumption of petroleum products in U.S.S.R. was less than in July and August of last year, official reports state that the consumption for the first eight months is running ahead of last year. The domestic gasoline demand the first eight months of this year was 873,594 tons, which compares with 667,625 tons for the same period in 1933. Other comparisons for the same periods are: Kerosene—1934, 2,262,887 tons; 1933, 2,215,139 tons; lubricating oil—1934, 884,145 tons; 1933, 797,495 tons; fuel oil—1934, 5,311,500 tons; 1933, 5,210,000 tons.

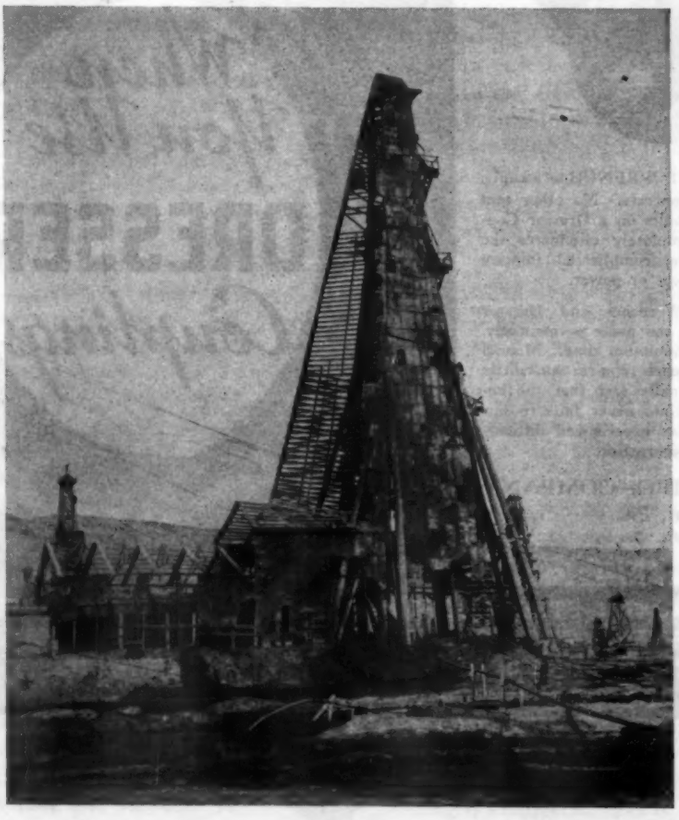
Preliminary reports show that the crude oil production in the U.S.S.R. in September totaled 1,989,200 metric tons. Calculated on the basis of 7 bbls. to the ton, the production averaged 464,140 bbls. daily, which compares with the 460,900-bbl. average in August and 461,800 bbls. in July.

The slight increase in daily average crude oil production materialized despite a decrease in drilling activity when compared with previous months. Drilling totaled 96,401 meters in September, 110,030 meters in August and 122,156 meters in July.

Crude oil runs to stills in September were 1,709,900 metric tons which was slightly less than the daily average figure for August and July.

PETROLEUM OPERATIONS IN THE U.S.S.R.
Preliminary Figures for September, 1934, and Revised Figures for August, 1934

	Sept., 1934	Pct. of plan	August, 1934	Sept., 1933	9 mos., 1934	9 mos., 1933	1934 pct. of 1933
Production of Crude Oil							
Azneft	1,607,500	99.2	1,629,900	1,545,600	14,100,600	10,842,700	130.0
Groszneft	241,100	51 2	274,900	391,200	2,699,300	3,818,900	70.7
Maineft	78,400	75.4	79,300	62,600	652,700	447,300	145 9
Embaneft	19,200	46.8	21,000	17,200	176,700	150,200	117.6
Other trusts	43,000	49.4	37,900	28,500	273,100	375,000	72.8
Total	1,989,200	85.7	2,043,000	2,045,100	17,922,400	15,634,100	114.6
Drilling (in Meters)							
Azneft	66,560	73.6	66,776	59,494	609,636	373,256	163.0
Groszneft	19,745	76.4	20,493	16,119	194,280	93,544	207.7
Maineft	6,967	119.7	6,124	3,842	44,819	31,775	141.1
Embaneft	4,666	71.8	5,207	3,125	36,077	29,511	122.2
Other trusts	8,463	36.4	11,013	10,554	90,540	68,711	131.8
Total	96,401	72.9	109,618	93,134	975,352	596,797	163.4
Consisting of:							
Production drilling	68,114	72.0	70,171	70,776	672,996	395,086	170.3
Wildcatting:							
Producing fields	17,361	65.8	23,634	9,844	181,475	114,300	158.7
In new areas	16,926	87.1	15,813	12,514	120,881	87,411	138.3
Runs to Stills							
Azneft	1,116,400	99.2	1,146,200	1,102,800	10,134,100	9,163,500	110.6
Groszneft	558,300	67.4	624,900	491,000	5,377,200	4,494,400	119.6
Aviafuel	31,300	116.8	32,500	27,800	199,800	214,300	93.2
Sredazneft	3,400	37.8	4,700	3,800	30,800	31,100	99.0
Total	1,709,900	85.9	1,808,300	1,625,400	15,741,900	13,903,300	113.2
Production of Gasoline							
Azneft	96,500	97.9	102,600	73,700	892,200	721,600	123.6
Groszneft	127,900	72.9	135,300	156,400	1,248,700	1,307,600	95.5
Aviafuel	9,800	55.4	10,500	1,700	33,400	18,700	178.6
Sredazneft	500	56.2	400	400	3,200	2,500	128 0
Total	229,800	80.5	247,100	232,200	2,078,200	2,050,400	101.4



—Photo by L. C. Uren.

Remains of rod-tool drilling rig, a type formerly widely used in the Russian oil fields—Bibi Eibat field, Baku region, U. S. S. R.

MEXICO

Drilling operations have shown a general increase this year based on official reports covering the first seven months and this increase in number of new wells completed has been reflected in a month to month gain in output of crude petroleum and the exports to foreign countries.

The reports show that 32 producing wells were completed the first seven months with an initial production of 10,969 bbls. The report by months is as follows (data in barrels):

Month—	No. of wells	Init. prod.
January	6	4,949
February	3	730
March	1	151
April	6	740
May	6	2,012
June	6	1,925
July	4	1,362
Total	32	10,969

In addition to the above, 54 wells were drilled, 28 of which were dry and 26 were abandoned because of salt water. One well was plugged because it no longer showed a commercial production.

The following table gives the crude oil production and exports by months (data in barrels):

Month—	Production	Exports
January	3,113,707	1,971,731
February	2,863,088	2,147,436
March	3,188,923	2,260,667
April	3,206,490	2,179,057
May	3,714,828	2,166,786
June	2,918,793	1,988,068
July	3,303,055	2,621,521
Total	21,308,884	15,334,870

JAPAN

The Department of Commerce and Industry in Japan has included an appropriation of 3,000,000 yen in its estimate for the 1935-1936 budget to encourage the development of "national liquid fuel self-sufficiency," according to the assistant trade commissioner of United States located at Tokyo. The sum of 195,000 yen has been allocated for the purpose of investigating the oil resources of Japan proper and the plans have been made to send research parties to Hokkaido, Aomori, Akita, Niigata and Nagano Prefectures.

The sum of 580,000 yen has been designated to encourage experimental drilling in oil fields throughout Japan proper, the Government subsidies being sufficient to pay for half of the actual expense of drilling. The amount of 172,000 yen has been set aside to investigate overseas oil resources. The Mitsui Bussan and the Japanese oil interests have jointly invested money in establishing an oil company in Dutch Borneo under Dutch law. On account of insufficient funds the company was forced to suspend drilling operations and in consideration of the importance of this particular undertaking 260,000 yen will be provided for in the subsidy to resume operations there.

PERSIA

Work in all branches is progressing in developing the new field of the Anglo-Persian Oil Co., Ltd., in Persia. The field, which is known as Naft-i-Shah, is located a short distance from the Iraq boundary near Khanaquin. The field will be connected by a 100-mile pipe line to Kermanshah, where a refinery is being built. The plant will be in regular operation next year. The products of the refinery will be distributed in northern Persia.

ROUGH *and* READY METHODS

HAVE GIVEN WAY TO SCIENTIFIC CONTROL

Tretolite engineers working in completely equipped laboratories for scientific research over a period of years have developed the surest and most economical process of treating crude oil and BS to pipe line requirements. You can have Tretolite Advisory Service quickly wherever you are located.

TRETOLITE COMPANY
MANUFACTURING CHEMISTS

Representatives in all principal fields

DALLAS ST. LOUIS, MO. LOS ANGELES

Group 3 Market Hopeful But Not Overconfident as New Purchasing Program Gets Under Way

By T. F. SMILEY

With another gasoline purchasing program getting under way this week, the Oklahoma (Group 3) market indulged a feeling of hopefulness, but it was not overconfident. The revised buying plan, it was explained, corrected defects which had weakened its predecessors, and besides that it was believed the rigors to which East Texas refiners had been subjected since the Federal Tender Board began its sittings had chastened them, leaving them in no mood to begin toying with the law.

Not for a while anyway.

More than 85 per cent of the refiners in the East Texas area (in point of refining capacity) have agreed to enter the new buying plan, it was said. Of 21 major companies which were expected to buy from these refiners the quantities of gasoline allotted them monthly by the Program Committee of the Planning and Cooperation Committee, 19 were understood to have committed themselves definitely to the plan.

Hope Others Will Fall Into Line

The holdouts, it was hoped, would fall into line soon, although their refusal to join in the new program was said to be based on a conviction it offered no greater promise of cure than the former ones. It was not forgotten that while the original buying plan was in operation crude runs to East Texas stills were estimated to have doubled during the two months ending with August 31, 1934. The East Texas scene had become a mammoth racket.

At the time of the sudden suspension of the old buying program last month only 15 refiners had entered it. Like the new one, it stipulated that the refiner should not produce, buy, transport or run through his refinery any illegal crude. These 15 refiners are said to be the only ones to whom tenders for interstate shipment of refined products have been doled out by the Tender Board. The others, unless they had their own well connections, have found themselves cut off from crude supplies.

The difficulty in getting tenders, with the consequent sharp falling off in interstate shipments of gasoline out of East Texas, caused prices to jump. Comparison of current quotations with those of a week ago might easily have led one to suppose the longed-for era of better days was at hand; but the higher figures seem to have been merely part of the confused jumble of fact, fog and fiddle-faddle cast up in a week of churning developments.

Gasoline, furnace oils, gas oils and distillates, all were thrusting quotations up into altitudes that looked a bit fantastic when set alongside recent ones. U. S. Motor low-octane fuel, rocketing from the 2 cents f.o.b. refinery at which it was quoted for resale less than a month ago, was demanding 4 cents this week, and some refiners were holding out for 4½ cents, a higher figure than was paid at any time during the 1934 season of peak consumption. But it was all a reflection of abnormal, unreal conditions prevailing in East Texas. The volume of actual spot business done was small and prices quoted in many cases were nominal.

Assertions that the flood of illegal oil and its products in East Texas has been stopped are so near the truth, for the time being, that for practical purposes they may be accepted at face. The handful of tenders granted by the Tender Board has been for out-of-the-state shipment only, so virtually all the movement of gasoline out of East Texas is for intrastate destinations and carried chiefly by truck.

Although East Texas refiners agreed among themselves to demand 11 cents (inclusive of tax) for all tank car and truck sales of gasoline, the enormous quantity seeking outlet through the only remaining avenue resulted soon in price cutting. Reinstatement of the buying plan checked resort to this method of getting business.

Withdrawal of East Texas as the principal source of petroleum products caused many buyers to turn to Oklahoma refiners, only to find the latter were operating under allocations that enabled them to do little more than take care of their regular trade. Furthermore, with quotations steadily rising under the influence of forced conditions in East Texas, the Oklahoma refiners displayed no haste to sell, especially after early resumption of the buying plan had been announced. In the meantime East Texas refiners were biting their fingernails.

Natural Gasoline Demand Stimulated

Curtailment of gasoline sales from East Texas had a mildly stimulating effect on natural gasoline, owing to the fact that the products of most other areas require a larger admixture of natural to impart needed volatility. There was a noticeable increase too in the demand for stabilized natural from buyers who found themselves unable to get straightrun material from East Texas. There were many inquiries for the 11-pound grade, but little obtainable for the reason that manufac-

(Continued on Page 31)

Refined Oil Market Barometer

Removal of East Texas as the source of various products, with resultant demand on other areas, causing prices to touch much higher levels. Reinstatement of the gasoline purchasing program expected further to tighten the market in that material. While the experience with buying plans thus far has not been calculated to instill confidence in their efficacy, the trade seems disposed to adopt a hopeful attitude. Except for products hitherto bought in East Texas prices show seasonal influence.

Mid-Continent.—Gasoline, heating oils, gas oils and distillates higher. Natural gasoline steady. Kerosene tighter.

East Coast.—Gasoline somewhat better, with prices unchanged. Lubricants weaker.

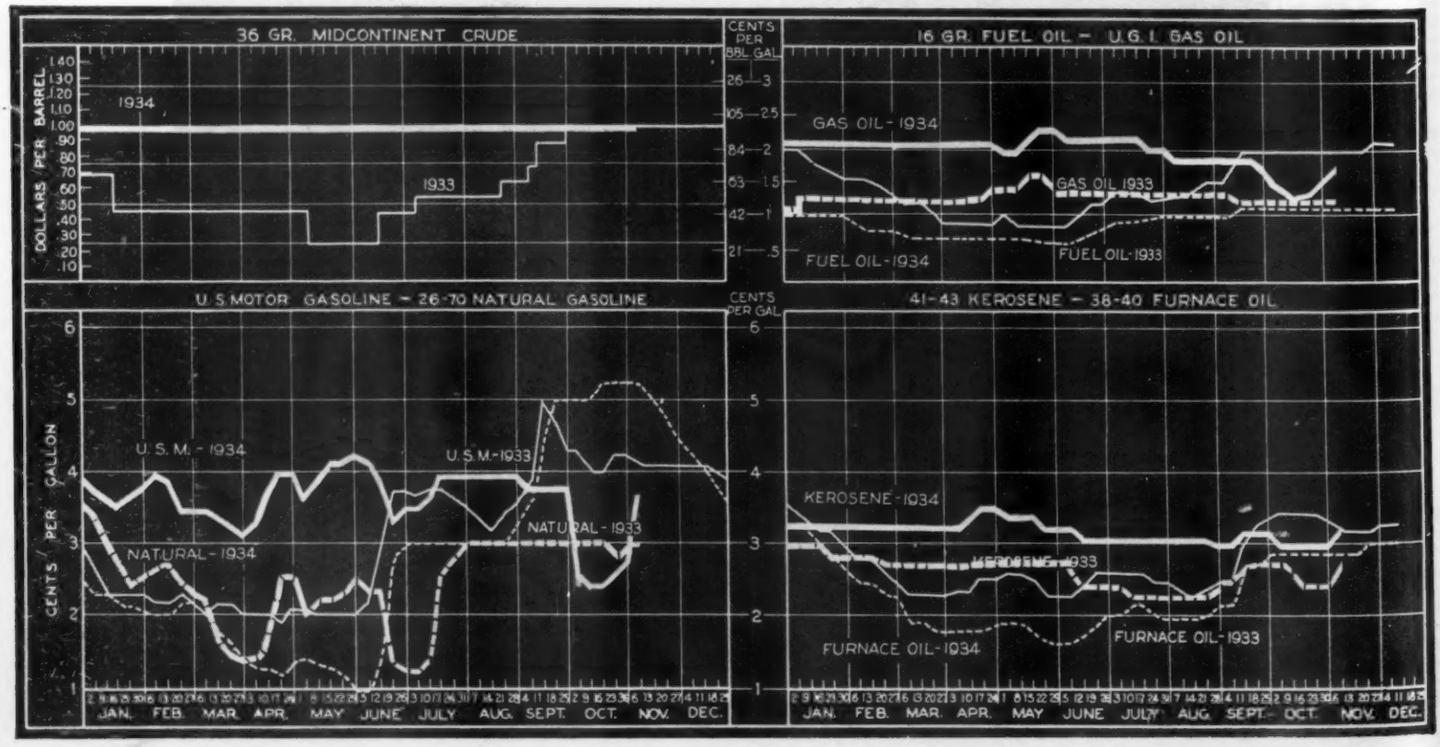
Gulf Coast.—Sharp advance in gasoline. Lubricants weak. Kerosene firmer. Fuels weak.

Pennsylvania.—Gasoline and fuel off, but both expected to show immediate recovery.

California.—Friction among dealers jeopardizing market stability. Kerosene and kerosene distillate showing fractional losses owing to government monopoly in Manchukuo. Fuel oil soft.

Chicago.—Gasoline continues strong and advancing. Heating oils in demand. Naphthas steady.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1934
1933
16 GR. FUEL OIL – U.G.I. GAS OIL
CENTS PER BBL GAL
GAS OIL - 1934
GAS OIL 1933
FUEL OIL - 1934
FUEL OIL - 1933
U.S. MOTOR GASOLINE – 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1934
U.S.M. - 1933
NATURAL - 1934
NATURAL - 1933
41-43 KEROSENE – 38-40 FURNACE OIL
CENTS PER GAL
KEROSENE - 1934
KEROSENE - 1933
FURNACE OIL - 1934
FURNACE OIL - 1933
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Promise of Improved Buying Serves to Encourage Better Feeling in Eastern Gasoline Market

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Nov. 5.—A check of tank car prices on refinery products today failed to reveal any important changes except in the case of steam refined stocks and bright stocks which are weak with lower prices on practically all grades.

The promise of improved buying in the gasoline market including higher quotations in East Texas and the Gulf Coast served to bring a better feeling into this market last week but there were no changes in quotations for tank car and small barge movement at Atlantic Seaboard points. Some improvement was also noted in the tank wagon and service station situation, in that the spread of price wars was stopped and preparations were being made to remedy some of the local conditions in which prices to consumers exclusive of taxes have dropped to the lowest levels in the history of the oil business.

At this writing the better feeling in the gasoline market extending from the tank car to the service station prices was largely based on the expectation of improved conditions rather than any actual changes. Conferences were held here last week which were attended by representatives of most of the larger companies. The desirability of resuming the gasoline buying program with the view of removing surplus gasoline from the market in an attempt to recover part or all of the ground lost in recent weeks was considered with several favoring such action and others opposing.

Another meeting of eastern marketers directed its efforts toward ending the gasoline price war conditions in New Jersey and many other points. Differences of opinion, with major operators on one side and the smaller operators on the other, centered around the differentials to be allowed in retail sales between the branded products of the former and the unbranded grades of the latter. The differentials allowed in this section over the past few months between the so-called regular grade of the independent dealers and the regular branded grade of the majors has been 1½ cents at many points and the independents are asking that this comparative situation be continued. The majors on the other hand feel that the price wars now prevalent in this territory have been largely brought about by these wide differentials which they pointed out are not justified on the basis of quality or refining costs. Some feel that the differential should be reduced to one-half cent.

This argument has been tied in with discussions as to price differentials between grades of motor fuel based largely on octane rating. The proper guaranteed margins for jobbers and dealers have also been discussed.

As to gasoline buying programs opinions vary from those who have always felt that the purchase of gasoline for the purpose of supporting a weak market structure is never justified to those who are equally as confident that a sound market cannot be maintained unless permanent arrangements are made to remove excess gasoline whenever and wherever it becomes available. Between these extreme views there are those who are willing to participate in a buying program in the present situation provided they are assured that the hot oil operations in Texas are under control and the distress material once removed will not be replaced. Many local observers with past history in mind have been slow in accepting at their face value the optimistic reports from Washington and the Mid-Continent that hot oil operations have been definitely ended and nothing more is to be feared from that angle in markets. These observers are not expecting any immediate improvement in the refinery markets of this territory and a few at least continue confident that lower quotations are in prospect including reduced postings for crude oil.

Cylinder Stocks

The weak domestic and export market which has prevailed for some time is rapidly bringing quotations in this market down to the lows of 1932 and early 1933. The No. 8 Pennsylvania Grade bright stock in barrels was quoted for export as low as 24 cents the latter part of last week with quotations of from 16 to 17 cents in bulk reported. The latter is below the going market quotations at inland points in the Pennsylvania Field. The prices on western bright stocks range down to 14 cents. The prices on steam refined stocks in barrels range from 16 to 21 cents for export (Pennsylvania grade) and 10 to 15 cents in bulk. Western steam refined stocks are quoted as low as 7 and 8 cents. Earlier in the year these Pennsylvania bright stocks in barrels brought 36 cents per gallon and 600 steam refined (untreated) sold as high as 26 cents per gallon. Western bright stocks at that time in bulk brought 25 cents per gallon.

While these stocks have shown a steady decline in prices in recent months neutral oils made from paraffin base crudes have been firm in price with an actual scarcity reported by several buyers.

Those in touch with the lubricating oil market are inclined to explain the weakness in stocks as being due to the changes in motor oil specifications which in turn are being reflected in manufacturing operations. The trend in finished motor oils is toward lighter oils of lower viscosity which means that larger percentages of neutrals and correspondingly small percentages of bright stocks are being used in compounding the finished oils. This development ties in with changes in manufacturing operations in which the so-called solvent method is replacing former practices at lubricating oil plants. This change undoubtedly means a lessened demand for stock and a later shifting in specifications of oils now commonly quoted. The motor lubricants made from the solvent refined oils in general have a lower viscosity index, lower carbon residue and better oxidation rating. With new standards in consumer markets it is pointed out that adjustments in the tank car markets both as to grading and quotations are inevitable and it is felt that these changes are under way at this time. These changes it is expected ultimately will also be reflected in export sales. Part of the slowness in lubricants at present is explained as due to a lessened industrial demand.

Prices

Domestic prices on U. S. Motor gasoline in the New York area in tank car lots continue to range from 5¼ to 5¾ cents for the white grades as posted by the major companies with 6 cents the prevailing market for the ethylized regular branded material. Small barge shipments on the white grades are one-fourth cent less.

There has been an active demand for tank car shipments to those points where retail prices have been reduced due to price wars. Most of this demand, however, is between refiners and jobbers having long time contracts which protect the jobber and permit him to secure supplies at prices substantially under the present open market quotations. It is reported that in some cases these contracts provide for cancellation on 30 days' notice and the notices have been given by the refiners in many instances. With the expiration of the contracts, the jobbers will be forced to buy on the spot market at prices which are now approximately the same as their net tank wagon schedules at points where retail prices have been reduced several cents a gallon.

The export gasoline market is unchanged with few inquiries reported. Nominal prices range from 3¾ cents for U. S. Motor at the Gulf Coast to 4¼ and 4⅝ cents for 64-66 375. Export kerosene prices are holding largely due to the greater activity in the domestic market. Several companies in this territory have reported a better movement of their kerosene and furnace oils to the domestic trade over the past 10 days. The domestic kerosene price here continues at 5 to 5¼ cents with the Nos. 2 and 4 furnace oils, 4½ cents. The increase in demand for kerosene and furnace oils is seasonal and supplies at refineries and water terminals are adequate so that no immediate changes in prices are anticipated.

The low gravity industrial fuels are quoted at 4 cents with 4¼ to 4½ cents for the Diesel grades and gas oils. The demand for these oils has not been active and the same situation applies to Bunker C fuels at $1.15 per barrel plus lighterage. The per barrel price for Diesel oil to the marine trade is $1.89.

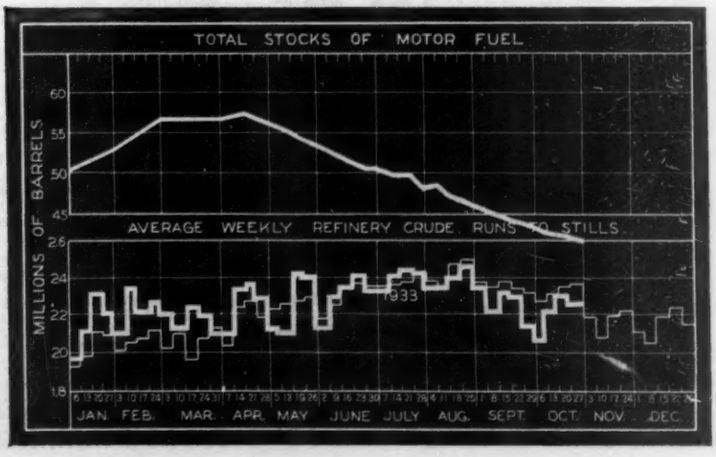
EAST TEXAS PRESSURE DROPS

FORT WORTH, Tex., Nov. 6—The East Texas engineering committee reports a 5-pound drop in weighted average bottom hole pressure in the field from October 1 to November 1, after checking over 300 wells. The Railroad Commission engineers previously reported a 3-pound increase but the commission engineers take pressures on only about 30 wells which is not as indicative as the other engineers' pressure.

American Petroleum Institute Weekly Refinery Statistics

Week Ending November 3, 1934

Refinery report not available on account of holiday (election day).



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

OKLAHOMA (Group 3)—	Nov. 6		Oct. 30	
U. S. Motor grades:				
Below 63 octane	.03¾	.04	.02¾	.03⅛
63-70 octane	.04½	.04¾	.03¾	.04
60-62 400 grades:				
Below 63 octane	.03¾	.04	.03	.03¼
63-70 octane	.04½	.04¾	.03⅞	.04⅛
64-66 375	.03⅞	.04½	.03⅝	.03⅞
68-70 360	.04	.04½	.03¾	.04
NORTH TEXAS—				
U. S. Motor grades:				
Below 63 octane	.03¾	.04	.02⅞	.03
63-70 octane	.04½	.04¾	.03⅞	.04⅛
60-62 400	.03¾	.04	.03	.03¼
64-66 375	.03⅞	.04½	.03⅝	.03⅞
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04¼		.03¼	.03⅜
63-70 octane	.05		.04½	.04⅝
60-62 400	.04¼		.03¼	.03½
68-70 360	.05		.04	.04⅛
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04¼		.03¼	.03⅜
63-70 octane	.05		.04½	.04⅝
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 63 octane	.03¾	.04	.03⅛	.03¼
63-70 octane	.04¾	.05	.04¼	.04⅜
60-62 400	.03¼	.04	.02⅞	.03¼
64-66 375	.03¾	.04	.03½	.04
68-70 360	.03⅞	.04⅛	.03¾	.04
Aviation fighting grade	.04¾	.05	.04¾	.05
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.04¾		.04⅞	
60-64.9 octane	.06		.06	
65-70 octane	.06⅜		.06⅜	
68-70 350	.06⅛		.06⅛	
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.07	.08
58-60 400	.08	.09	.08	.09
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.05¼		.05¼	
Baltimore	.05¼		.05¼	
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	.05½		.05½	
Philadelphia	.05½	.05¾	.05½	.05⅝
Boston	.05¾		.05½	.05¾
Baltimore	.05½		.05½	
Charleston, S. C.	.05½		.05½	.05¼
U. S. Motor, 65 and above:				
*New York	.05¾		.05¾	
Philadelphia	.05¾		.05¾	.06
Boston	.05¾	.06	.05¾	.06
Charleston, S. C.	.05¾		.05¾	.06
GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.05		.04½	
60-64.9 octane	.05½	.05⅜	.04¾	.05
65 octane and higher	.05½	.05⅝	.05¼	

*All grades of gasoline one-fourth cent less for small barge shipments.

Naphthas

	Nov. 6		Oct. 30	
PENNSYLVANIA (inland refineries)—				
50-52 (blending)	.04⅝		.04⅝	
52-54 450 (blending)	.04⅝		.04⅝	
54-56 450 (blending)	.04⅝		.04⅝	
50-52 450 (blending)	.04⅝		.04⅝	
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.03¾	.04	.03¼	.03¾
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¾	.07	.06¾	.07
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾	.08	.07¾	.08
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¾	.09	.08¾	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¾	.07	.06¾	.07
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
Pet. thinner, 290-300 i.b.p.-415 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Petroleum spirits	.05¾	.06	.05¾	.06

Natural Gasolines

OKLAHOMA (Group 3)—	Nov. 6		Oct. 30	
Grade 26-70	.03		.03	
Grade 18-55	.03⅝		.03½	
Low vapor pressure grades:				
14 lb. v.p. (max.)	.03¾	.04	.03¾	
11 lb. v.p. (max.)	.04¼	.04½	.04⅛	.04¼
NORTH TEXAS—				
Grade 26-70	.02⅝	.02¾	.02¾	
Grade 18-55	.03⅜		.03⅜	
Low vapor pressure grades:				
14 lb. v.p. (max.)	.03⅝	.03¾	.03⅝	.03¾
11 lb. v.p. (max.)	.04	.04¼	.04	
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.03⅜		.03⅜	
CALIFORNIA—				
75-85 375	.06½	.06¾	.06½	.06¾

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Nov. 6		Oct. 30	
41-43	.03¼	.03½	.03	.03¼
42-44	.03⅝	.03⅞	.03⅛	.03⅜
NORTH TEXAS—				
40-41	.02⅞	.03⅛	.02⅞	.03⅛
41-43	.03	.03¼	.03	.03¼
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.03⅜		.03⅜	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.03⅜	.03½	.03⅜	.03½
PENNSYLVANIA (inland refineries)—				
45	.04⅝		.04⅝	
46	.04¾		.04¾	
47	.04⅛		.04⅛	
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03⅛	.03¼	.03	.03⅛
42-44	.03⅜	.03½	.03¼	.03⅜
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¾	.05¼	.04¾	.05¼
NEW YORK (Bayonne, N. J.)—				
41-43	.05	.05¼	.05	.05¼
GULF COAST (domestic)—				
41-43	.04½	.04⅝	.04½	.04⅝

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	Nov. 6	Oct. 30
Still run	5.75	5.75
Direct from still	6.75	6.75
Egg, nut, pea	8.25	8.25
Lump	8.25	8.25

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

OKLAHOMA (Group 3)—	Nov. 6		Oct. 30	
32-36 straw	.02¾	.02⅞	.02⅝	.02¾
36-38 straw	.02⅝	.02¼	.02⅝	.02½
38-40 straw	.02¾	.02⅞	.02½	.02⅝
38-40 prime white	.02⅞	.03	.02⅝	.02¾
NORTH TEXAS—				
38-40 straw	.02¾	.02⅞	.02½	.02⅝
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.02¾	.02⅞	.02½	.02¾
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.02¾	.02⅞	.02⅝	
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.02¾	.03	.02⅜	.02⅞
38-40 straw	.02¾	.03	.02⅝	.02⅞
38-40 prime white	.02⅞	.03⅛	.02¾	.03
NEW YORK (Bayonne, N. J.)—				
No. 1	.05	.05¼	.05	.05¼
No. 2	.04½		.04½	
No. 4	.04½		.04½	

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gallon; Diesel and fuel oils per barrel)

OKLAHOMA (Group 3)—	Nov. 6		Oct. 30	
32-36 gas oil cracking stock	.01¾	.02	.01¾	.01⅝
U.G.I. gas oil	.01¾	.02	.01½	.01⅝
32-36, zero to 15 gas oil	.02½	.02⅝	.02½	.02⅝
28-30, No. 3 burner oil	.97½	1.02½	.95	1.00
26-30, zero to 10 fuel oil	.85	.95	.85	.95
24-26 fuel oil	.75	.80	.75	.80
20-22 fuel oil	.70	.72½	.70	.72½
Below 16 fuel oil	.60	.62½	.60	.62½
NORTH TEXAS—				
32-36 gas oil, industrial	.01¾	.02	.01¼	.01⅜
22-26 fuel oil	.67½	.70	.67½	.70
Below 20 fuel oil	.57½	.62½	.57½	.62½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02½	.02¾	.02⅜	.02½
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02½	.02¾	.02½	
32-36 gas oil	.02½	.02⅝	.02⅝	.02½
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.01⅞	.02	.01½	.01⅝
28-30 zero to 10, fuel oil	.95	1.00	.95	1.00
26-28 zero to 10, fuel oil	.85	.90	.85	.90
22-26 zero to 10, fuel oil	.75	.80	.75	.80
18-22 zero to 10, fuel oil	.62½	.67½	.62½	.67½
Below 18 fuel oil	.55	.60	.55	.60

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.03⅝		.03¼	
CALIFORNIA—				
Los Angeles:				
30-34 gas oil per bbl.	1.10	1.26	1.10	1.26
27 plus Diesel	1.10	1.15	1.05	1.15
27 plus Diesel (bunkers)	1.13	1.20	1.13	1.20
12-16 (bunkers at tidewater)	.82	.85	.82	.85
10-16 (cargo lots)	.66	.75	.66	.75
12-17 (tank cars)	.55	.80	.60	.80
San Joaquin Valley:				
10-18 (tank cars)	.50	.70	.55	.70
San Francisco:				
27 plus Diesel per bbl.	1.15	1.25	1.15	1.25
27 plus Diesel (bunkers)	1.19		1.19	
10-16 (bunkers)	.89		.89	
GULF COAST—				
28-30 gas oil	.03½	.03⅝	.03½	.03⅝
28-30 Diesel (bunkers)	1.70		1.70	
Bunker C (bulk cargoes)	.85	.90	.85	.90
Bunker C (bunkers)	.95	1.00	1.00	
NEW YORK (Bayonne, N. J.)—				
27 plus, gas oil	.04¼	.04½	.04¼	.04½
28-30 Diesel (lighterage 6½ cents per bbl.)	1.89		1.89	
28-30 Diesel (tank cars)	.04½	.04¾	.04¼	
*Bunker C (to ocean-going ships in N. Y. harbor)	1.15		1.15	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis at 100° F. except Pennsylvania, and color N.P.A.)

OKLAHOMA (Group 3)—	Nov. 6		Oct. 30	
Zero to 10 Cold Test:				
150-3	.10		.10	
180-3	.11¼		.11¼	
180-4	.10¾		.10¾	
200-3	.11¾		.11¾	
200-4	.11¼		.11¼	
240-3	.13¾		.13¾	
240-4	.13¼		.13¼	
280-3	.14¾		.14¾	
280-4	.14		.14	
300-3½	.15¼		.15¼	
400-4	.17¼		.17¼	
100-2 paraffin oil	.05¾		.05¾	
15-20 Cold Test:				
200-3	.10¾		.10¾	
200-4	.10¼		.10¼	
240-3	.12¾		.12¾	
240-4	.12¼		.12¼	
280-3	.13¾		.13¾	
280-4	.13		.13	
GULF COAST—				
Pale Oils:				
200-3	.07¼	.07½	.07½	.08
300-3	.07½	.08	.08	.08½
500-3½	.08½	.09	.09	.09½
750-3½	.09	.09¼	.09½	.10
1,200-3½	.09½	.09¾	.10	.10½
2,000-4	.09¾	.10	.10¼	.10¾
Red Oils:				
200-5-6	.07	.07¼	.07¼	.07½
500-5-6	.07¼	.07½	.07¾	.08
500-5-6	.08	.08½	.08½	.09
750	.08¼	.09	.09	.09½
1,200-5-6	.09¼	.09½	.09¾	.10
CALIFORNIA—				
Pale Oils:				
100-2½-3	.12½	.14½	.12½	.14½
200-2½-3	.12½	.14½	.12½	.14½
300-3-3½	.12½	.14½	.12½	.14½
350-3-4	.12½	.14½	.12½	.14½
400-3-4	.12½	.14½	.12½	.14½
450-3-4	.12½	.14½	.12½	.14½
550-3-4	.12½	.14½	.12½	.14½
600-3-4	.12½	.14½	.12½	.14½
Red Oils:				
200-4-5	.12½	.14½	.12½	.14½
300-5-6	.12½	.14½	.12½	.14½
350-5-6	.12½	.14½	.12½	.14½
400-5-6	.12½	.14½	.12½	.14½
450-5-6	.12½	.14½	.12½	.14½

500-5-6	.12½	.14½	.12½	.14½
600-5-6½	.12½	.14½	.12½	.14½
700-6½ plus	.12½	.14½	.12½	.14½
750-6½ plus	.12½	.14½	.12½	.14½
900-6½ plus	.12½	.14½	.12½	.14½
PENNSYLVANIA—				
150 vis. at 70° F., 3 color, 400-405 flash:				
Zero pour test	.23½	.24	.23½	.24
10 pour test	.22½	.23	.22½	.23
15 pour test	.22	.22½	.22	.22½
25 pour test	.21	.21½	.21	.21½
180 vis. at 70° F., 3 color:				
25 pour test	.24½	.25	.24½	.25
200 vis. at 70° F., 3 color:				
Zero pour test	.30	.30½	.30	.30½
10 pour test	.29	.29½	.29	.29½
15 pour test	.28½	.29	.28½	.29
25 pour test	.27½	.28	.27½	.28

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Nov. 6		Oct. 30	
Bright Stocks:				
190-200 D	.18		.18	
150-160 D, 0-10	.15		.15	
150-160 D, 10-25	.14½		.14½	
150-160 24-40	.14		.14	
150-160 E	.14		.14	
Steam refined:				
630 light green (treated)	.13		.13	
600 light green (untreated)	.06	.08	.06	.08
600 dark green (untreated)	.04½	.07	.04½	.07
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.20½	.22	.20½	
15 pour test	.19½	.21½	.19½	
20 pour test	.19	.21	.19	
25 pour test	.17	.18	.17	
Steam refined:				
600	.09½	.10½	.09½	.10½
650	.13	.13½	.13	.13½
600 Pennsylvania flash	.14	.14½	.14	.14½
630 flash	.18	.18½	.18	.18½
600 Warren E filtered	.14	.14½	.14	.14½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Nov. 6		Oct. 30	
124-126 white crude scale	.03¼	.03⅜	.03¼	.03⅜
PENNSYLVANIA—				
122-124	.0325	.0330	.0325	.0330
124-126	.0330	.0335	.0330	.0335
NEW YORK—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.03¼		.03¼	
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03	.03⅛	.03	.03⅛
Lily white	.06⅝	.06¾	.06⅝	.06¾
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0525
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Nov. 6	Oct. 30
U. S. Motor	.03⅞	.03⅞
60-62 400	.04	.04
61-63 390	.04¼	.04¼
64-66 375	.04⅜	.04⅜
LOS ANGELES, CALIF.—		
U. S. Motor grades:		
53-55 octane	.04	.04¼
55-65 octane	.04¼	.04½
65-67 octane	.04½	.04¾
67-69 octane	.04¾	.05
Above 69 octane	.05	.05¼
58-60 400 endpoint	.04¾	.05½

KEROSENE

GULF COAST—		
41-43 prime white	.03⅞	.03⅞
41-43 water white	.04	.04
44 water white	.04⅛	.04⅛
LOS ANGELES, CALIF.—		
41-43 water white	.04¼	.04¾

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—		
Cylinder Stocks:		
600 Warren E	.20	.20½
600 S.R. unfiltered	.16	.16½
650 S.R. unfiltered	.18¼	.18½
600 flash S.R.	.19	.19½
630 flash S.R.	.23½	.24
Bright Stocks:		
8 color	.24	.24½
6½ plus color, in dilution	.23	.23½

NEUTRAL OILS

200-3 color	.34	.35
150-3 color	.27	.28

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound)—		
120-122 a.m.p.	.0405	.0425
123-125 a.m.p.	.0435	.0455
125-127 a.m.p.	.0440	.0465
128-130 a.m.p.	.04¾	.0490
130-132 a.m.p.	.0495	.0505
133-135 a.m.p.	.0540	.0565
135-137 a.m.p.	.0565	.0590

Crude Oil Gravity Table

Gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas and Louisiana	9 Gulf Coast, Texas and Louisiana	10 Cotton Valley, Louisiana
Below 20	....	....	....	....	....	....	....	$ .82	$.82	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.06	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.08	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1 06	1.01	1.01	.89	.79	1.17	1.06	1 12	1.13	1.00
40 and over	1 08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1 02

Note—On November 6, Kanotex Refining Co. and Globe Oil & Refining Co. resumed the Oklahoma-Kansas price schedule shown in Column 1 in the table, making the prices retroactive to October 25, which was the day they cut their prices 46 cents per barrel.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Philtex Oil Co., which begins with below 31° at 88 cents.

Column 1—Effective September 29, Texas Co. of Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma;; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Phiitex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; October 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29, in the Van Peol, Van Zandt County, Pure Oil Co. posted below 29°, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Philtex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Phiitex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 6—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co. and on September 30, by Texas Co., which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7—Effective September 29, by Stanolind Oil & Gas Co.

Column 8—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana; 20-20.9°, 84 cents with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana; below 20°, 72 cents with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20°, 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule of 2 cents on each degree, but changed it on September 30.)

Column 10—Effective September 29, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 34)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas	$1.00
Corsicana (heavy) June 17, 1933)*	.80
Other fields	(See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., Empire Oil & Refining Co., and Atlas Pipe Line Co. On October 22, 1934, the Atlas Pipe Line Co posted 60 cents per barrel in East Texas, but on November 3 resumed its posted price of $1 per barrel, making it retroactive to October 22.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933)	$.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933)	.75
Pecos County, Yates shallow Pool (Sept. 29, 1933)*	.65
Jones and Fisher Counties	*See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers.

	(See gravity table)
Tomball (see note)*	$1.10
Livingston (Sept. 29, 1933)†	1.00
Cleveland (Jan. 11, 1934)	1.00
Greta (Sept. 29, 1933)	.85
Refugio, light	(See gravity table)
Refugio, heavy (Sept. 29, 1933)‡	.85
Markham and High Island	(See Gulf Coast gravity table)
Conroe	(See Conroe gravity table)
Bosco, La. (Oct. 15, 1934)§	$1.02

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2 by Magnolia Petroleum Co., and November 16, by Stanolind Oil & Gas Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co. Cleveland (Liberty County) posted by Magnolia Petroleum Co. §Bosco posted by Pure Oil Co.

South Central and Southwest Texas

(See note below table)

Darst Creek	$.87
Mirando	.80
Luling (Sept. 29, 1933)	.75
Pettus	1.05
Salt Flat	.87
Lytton Springs (Sept. 29, 1933)	.95
Duval County (Sept. 29, 1933)	.80
Saxet	.85

Note—Effective on September 29 by Humble Oil & Refining Co., in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by

(Continued on Page 34)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

November 6, 1934

Taxes

The gasoline quotations given in the following tables include the 1 cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon, or 2 cents a gallon off retail prices, is permitted for purchases running between 4,000 and 10,000 gallons a month, and 2 cents a gallon off tank wagon, or 4 cents a gallon off retail prices, for purchases in lots of more than 10,000 gallons a month The minimum delivery is 25 gallons

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Denver, Colo.	18.0	20.0	5.0	12 5
Pueblo	18.0	20.0	5.0	11.0
Grand Junction	20.5	21.5	5.0	15.0
Casper, Wyo.	18.0	20.0	5.0	11 5
Cheyenne	18.0	20.0	5.0	13.0
Butte, Mont.	21.0	23.0	5.0	17.5
Billings	21.0	23.0	5.0	16.5
Helena	21.0	23.0	5.0	17.5
Great Falls	21.5	23.5	5.0	17.5
Salt Lake, Utah	19.0	21.0	5.0	16.0
Boise, Idaho	22.5	24.5	5.0	18.0
Twin Falls	22.5	24.5	5.0	18.0
Albu'que, N. M.	18.0	20.0	*7.0	13 0

*One-cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Chicago	12.8	12.8	4.0	6.0
Decatur, Ill.	14.4	9.9	4.0	10.2
E. St. Louis	14.1	9.9	4.0	9.5
Joliet	14.5	16.5	4.0	10.2
Peoria	14.4	10.0	4.0	10.2
Quincy	12.9	14.9	4.0	10.0
Davenport, Ia.	14.2	14.0	4.0	10.1
Des Moines	14.1	16.1	4.0	10 1
Mason City	14.4	16.4	4.0	10.1
Sioux City	14.2	16.2	4.0	9.7
Duluth, Minn.	15.0	17.0	4.0	10.4
Mankato	14.7	16.7	4.0	9.5
Minneapolis	15.7	13.4	4.0	10.4
LaCrosse, Wis.	15.7	17.7	4.0	10.8
Green Bay	15.9	17.9	5.0	10.2
Milwaukee	14.6	16.6	5.0	9 0
Madison	15.7	16.3	5.0	9.9
Detroit, Mich.	15.0	17.0	4.0	10.5
Grand Rapids	14.7	16.7	4.0	10.2
Saginaw	15.0	17.0	4.0	10.5
Evansville, Ind.	13.5	12.5	5.0	10.0
Indianapolis	16.1	18.1	5.0	10.2
South Bend	16.4	18.4	5.0	9.0
Fargo, N. Dak.	15.7	17.7	4.0	11.4
Huron, S. Dak.	16.3	18.3	5.0	11.4
Sioux Falls	15.6	17.6	5.0	10.9
Kans. C., Mo.*	13.6	15.6	4.0	7.5
Springfield	15.3	15.3	4.0	8.8
St. Louis	12.7	12.5	3.5	8.7
St. Joseph*	13.6	15.6	4.0	7.8
Wichita, Kans.	13.2	15.2	4.0	7.5
Bartlesville, Ok.	15.7	18.2	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Discounts to dealers, effective March 1, 1934: Undivided accounts, 4 cents a gallon on Red Crown Ethyl and Standard Red Crown, divided accounts, 3½ cents a gallon on Red Crown Ethyl and Standard Red Crown.

Stanolex Furnace Oil in Chicago

Effective Sept. 6, 1934, f.o.b. Chicago tank wagon prices: No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8¼ cents; 100-149 gallons, 7¾ cents; 150 gallons or more, 6¾ cents; No. 2 (30-34, stw. zero), less than 150 gallons, 7½ cents; No. 3 (22-26, zero), less than 150 gallons, 7 cents; No. 4 (12-16, zero), less than 400 gallons, 6½ cents; viscosity of No. 4, 90-115 at 100° F.; No. 5, less than 400 gallons, 5¾ cents. For deliveries of more than stated quantities of Nos 1 2, 4 and 5, deduct 1 cent.

Naphtha

	Tank wagon*
Petroleum spirits	16.9

*1-cent Federal tax.

V M &P. naphtha 18.0

Cleaners' naphtha 18 0

Stanisol 18.0

*Prices include 3-cent Illinois tax, but not Prices f.o.b. Chicago, September 13, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.	19.0	22.0	7.0	14.5
Augusta	20.0	22.0	7.0	14.5
Macon	20.0	22.0	7.0	14.5
Savannah	19.0	21.0	7.0	14.0
Birm'ham, Ala.	18.0	20.0	8.0	11.0
Mobile	20 5	22.5	8.0	12.0
Montgomery	21.5	23.5	8.0	15.0
Jackson, Miss.	18.5	20.5	8.0	13.0
Vicksburg	15.5	17.5	7.0	12.0
Jack'ville, Fla.	18.0	20.0	8.0	11.5
Miami	18.0	20.0	8.0	13.5
Pensacola	18.0	20.0	8.0	13.5
Tampa	18.0	20.0	8.0	12.5
Lexington, Ky.	18.5	20.5	6.0	11.5
Covington	14.0	15.0	6.0	11.5
Louisville	18.0	20.0	6.0	11.0
Paducah	16.5	18.5	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	16.0	18.0	5.0	6 0
Fort Worth	16 0	18.0	5.0	6.0
Houston	16 0	18.0	5.0	8.5
San Antonio	16.0	18.0	6.0	8.5
El Paso	17.0	19.0	5.0	11.0
Muskogee, Ok.	16.0	18.0	5.0	6.0
Okla. City	15.0	17.0	5.0	7.0
Tulsa	16.0	18.0	5.0	7.5
Ft. Smith, Ark.	13 5	15.5	5.0	8.0
Little Rock	13.5	14.5	7.5	9.0
Texarkana	14.0	16.0	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Atl'tic City, N.J.	9.5	12.0	4.0	10 0
Newark	7.4	9.9	4.0	8.5
Annapolis, Md.	12.6	15.6	5.0	10 0
Baltimore	10.5	13.0	5.0	9.5
Cumberland	14.0	17.5	5.0	12.7
Wash'g'n, D. C.	9.5	12.0	3.0	11.5
Danville, Va.	15.7	19.2	6.0	12 9
Norfolk	12.2	14.7	6.0	11.3
Petersburg	12.3	14.8	6.0	11.4
Richmond	12.3	14.8	6.0	11.7
Roanoke	13 3	15.8	6.0	12.9
Charls'n, W.Va.	14.0	17.5	5.0	12.6
Parkersburg	12.3	15.3	5.0	11.2
Wheeling	14.0	17.5	5.0	12.2
Charlotte, N. C.	17.0	20.5	7.0	13.5
Hickory	15.5	18.0	7.0	13.7
Mt. Airy	17.0	20.0	7.0	13.8
Raleigh	15.5	18.0	7.0	13.3
Salisbury	12.5	15.0	7.0	13.6
Charleston, S.C.	15.2	18.7	7.0	11.3
Columbia	14.9	17.4	7.0	13.2
Spartanburg	14.5	17.0	7.0	13.5

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Omaha	15 6	17.4	5.0	10.0
McCook	16.3	18.3	5.0	10.7
Norfolk	16.0	17.9	6.0	10.4
North Platte	16.4	18.3	5.0	10.0
Scottsbluff	17.1	18.3	5.0	9.0

Note—Discount to dealers, including any rentals under lease and agency agreements: Undivided accounts, Standard Red Crown and Red Crown Ethyl Gasoline 4 cents. Reliance (third brand) 3 cents, under service station price. Divided accounts, Standard Red Crown Ethyl Gasoline 3½ cents. Reliance (third brand) 2½ cents under service station price. Discounts to consumers covered only by form CD-1, official commercial consumer contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	12.0	14.5	*7.0	†12.0
Baton Rouge	13.7	16.7	6.0	†12.0
Alexandria	14.6	17.6	*7.0	†10.0
Lafayette	15.3	18.8	*7.0	†12.0
Lake Charles	14.7	17.7	*7 0	†12.0
Shreveport	10 5	13.0	6.0	†10.0
Knoxville, Tenn.	15.0	17.5	8.0	13.5
Memphis	12.9	15.4	8.0	10.5
Chattanooga	13.5	16.0	8.0	11.0
Nashville	12 9	15.4	8.0	12.0
Bristol	13.9	16.4	8.0	14.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax.

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price bases to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at dealer price less one-half cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank wagon†	Posted retail	Incl'ds tax of	Kero. tank wagon
San Francisco	16.5	18.5	4.0	12.5
Los Angeles	15.5	17.5	4.0	12.5
Fresno, Calif.	17.0	19.0	4.0	14.0
Phoenix, Ariz.	20.0	22.0	6.0	‡16.0
Reno, Nev.	19.0	21.0	5.0	15.5
Portland, Ore.	19.0	21.0	6.0	13.5
Seattle, Wash.	19.0	21.0	6.0	13.5
Tacoma	19.0	21.0	6.0	13.5
Spokane	22.0	24.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Philadelphia, Pa.	11.5	11.5	4.0	9.0
Pittsburgh	13.25	13.5	4.0	10.0
Allentown	13.25	15.9	4.0	10.0
Erie	13.25	15.0	4.0	9.0
Scranton	13.25	15.0	4.0	10.0
Altoona	13.25	15.0	4.0	10.0
Dover, Del.	13 25	15.0	4.0	10.0
Wilmington	13.25	15.0	4.0	9.0
Springf'd, Mass.	11.0	11.5	4.0	7.5
Worcester	12.5	13.0	4.0	8.5
Hartford, Conn.	12.25	13.0	3.0	7.5
New Haven	12.5	13.5	3.0	7.5
Providence, R.I.	11.0	11.5	3.0	7.5

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

New York and New England

SOCONY-VACUUM CO., INC.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	13.5	13.5	4.0	8.5
Met. New York	15.0	17.0	4.0	8.5
Brooklyn, Bronx, Queens, Nassau	15.0	17.0	4.0	8.5
Buffalo	16.5	16.5	4.0	9.0
Rochester	13.5	13.5	4.0	8.5
Syracuse	16.5	16.5	4.0	9.25
Boston, Mass.	15.0	16.0	4.0	8.5
Portland, Me.	17.0	18.0	5.0	8.75
Manch't'r, N.H.	14.5	14.5	5.0	9.0
Burlington, Vt.	13.5	19.5	5.0	8.75

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Ohio points	15.0	17.0	5.0	*12.5

*Includes state tax of 1 cent, effective July 22.

Canada*

IMPERIAL OIL, LTD.
Imperial 3-Star Gasoline

	Gasoline: Tank wagon	Service station	Incl'd tax of	Kero. tank wagon
Hamilton, Ont.	†21.0	23.5	6.0	11.0
Toronto, Ont.	†21.0	23.5	6.0	11.0
Brandon, Man.	30.3	33.3	7.0	21.0
Winnipeg, Man.	28.7	31.7	7.0	20 0
Regina, Sask.	29.0	32.0	6.0	21.0
Saskatoon, Sask.	31.8	34.8	6.0	24 0
Edmonton, Alta.	31.2	34.2	6.0	23 0
Calgary, Alta.	28.5	31.5	6.0	21 0
Vancouver, B.C.	27.0	30.0	7.0	24.0
Montreal, Que.	24.0	27.0	6.0	11.0
St. John, N.B.	26.0	30.0	1.0	21 0
Halifax, N.S.	26.0	30.0	5.0	21 0

Imperial gallon used in Canada. †Gasoline garned by service station price.

Maritime provinces, all deals 4 cents on service station price. All other provinces open dealers 2.5 cents off service station price and 1 cent additional to 100 per cent accounts.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Atlantic Refining Co., October 27, reduced tank wagon gasoline one-fourth cent and station gasoline one-half cent in Philadelphia. October 31, advanced tank wagon and station gasoline one-half cent in Pittsburgh. October 29, reduced tank wagon and station gasoline one-half cent in Springfield; October 31, reduced tank wagon kerosene one-half cent. October 26, reduced tank wagon gasoline one-half cent and station gasoline 1 cent in Hartford; October 27, reduced tank wagon gasoline one-half cent and station gasoline 1 cent further; October 29, reduced tank wagon gasoline one-half cent and station gasoline 1 cent. October 27, reduced tank wagon gasoline one-fourth cent and station gasoline one-half cent in New Haven. October 24, reduced tank wagon kerosene one-half cent in Providence.

Standard Oil Co. of Louisiana, October 15, reduced tank wagon gasoline one-half cent and station gasoline 1 cent in Alexandria, Lake Charles and Baton Rouge. October 13, reduced tank wagon gasoline 1.8 cents and station gasoline 2.8 cents in New Orleans; October 14, reduced tank wagon and station gasoline 1 cent further. October 15, advanced tank wagon one-half cent and reduced station gasoline one-half cent in Chattanooga; October 15, reduced tank wagon and station gasoline one-half cent in Memphis; October 16, reduced tank wagon gasoline one-half cent further; October 17, reduced tank wagon and station gasoline one-half cent further; October 18, advanced tank wagon gasoline 1 cent; October 19, reduced tank wagon and station gasoline one-half cent; October 20, reduced tank wagon and station gasoline 2.7 cents further. October 16, reduced tank wagon gasoline 1.5 cents and station gasoline 1 cent in Nashville; October 17, reduced tank wagon and station gasoline one-half cent further; October 18, reduced tank wagon gasoline one-half cent and station gasoline 1.5 cents; October 20, reduced tank wagon and station gasoline 1 cent; October 23, reduced tank wagon and station gasoline 0.6 cent. October 16, reduced tank wagon and station gasoline one-half cent in Bristol; October 17, reduced tank wagon gasoline 1 cent further; October 18, advanced tank wagon gasoline 1 cent; October 24, reduced tank wagon and station gasoline 0.1 cent. October 16, reduced tank wagon gasoline one-half cent and station gasoline 1 cent in Knoxville; October 17, reduced tank wagon 1.5 cents and station gasoline one-half cent; October 18, advanced tank wagon gasoline one-half cent and reduced station gasoline one-half cent; October 19, reduced tank wagon and station gasoline one-half cent further; October 20, reduced them one-half cent further.

Standard Oil Co. of New York, October 27, reduced tank wagon gasoline 1.5 cents and station gasoline 2.5 cents in Albany. October 26, reduced station gasoline 1 cent in Buffalo. October 29, reduced tank wagon gasoline 3 cents and station

(Continued on Page 31)

NEWS FOR SALES DEPARTMENTS

More Economical Highways Subject at A.P.I. Meeting

The possibility of developing, particularly in rural areas, an extensive system of highways built and maintained so economically as to permit their financing by reasonable taxes upon highway users, will be discussed at the fifteenth annual meeting of the American Petroleum Institute at Dallas, Tex., November 13 to 15.

Belief has grown within the industry, whose principal product, gasoline, is taxed $700,000,000 annually to finance road building, that greater mileages of roads better adapted to traffic needs can be built at less expense, and possibly with lower gasoline tax rates, if more care is used in planning highway programs.

It has been found that more than 80 per cent of American farms still are served by roads that not only are unimproved, but impassable part of the year. Improvement of these and other roads can be financed with lower taxes, if all special additional tax revenue is used for highways instead of being in part diverted, as at present, it is believed.

The general topic of the group session, which will be held Thursday morning, November 15, will be "Highways and Markets." It will be sponsored by the Institute's Division of Marketing. J. E. Pennybacker, of the Asphalt Institute, will preside as chairman. Speakers and subjects follow:

"Building Highways in Accordance With Traffic Demands," H. H. Kelly, U. S. Bureau of Public Roads; "Making Mud a Memory," W. A. Hardenberg, editor "Public Works Magazine," and "The Petroleum Industry's Responsibility and Opportunity in the Highway Program," Mr. Pennybacker.

Allow Many Requests for Larger Motor Fuel Output

WASHINGTON, D. C., Nov. 5.—The refinery board of review, which was called into special session October 29 to review appeals raised in accordance with the order of Oil Administrator Ickes on October 18, heard 41 appeals. Decisions on these appeals have been rendered subject to approval by the Planning and Coordination Committee and the oil administrator.

The order referred to, which necessitated the calling of this special meeting, was issued by Secretary Ickes on the recommendation of the board of review and the Planning and Coordination Committee.

Its purpose is to allow those companies whose gasoline inventories have gone below normal through operation of the refinery sections of the oil code to build their stocks back up to working levels.

Committees have been at work in each refining district for several months checking the inventory requirements of each refinery and the data thus gathered is being used as the basis on which the appeals are decided. In conjunction with this is the knowledge of the needs of the industry which the members of the board have. It is believed that these decisions will place all companies on a more equitable basis.

The total increases asked for by the appellants amounted to 2,998,575 bbls., of which total an increase of 1,432,479 bbls. was granted.

DR. EGLOFF PRESIDES

Dr. Gustav Egloff, Universal Oil Products Co., Chicago, presided at a joint meeting of the Chicago, Indianapolis and St. Louis section of the American Institute of Mining and Metallurgical Engineers which assembled at the University of Illinois at Urbana on October 27. The purpose of the meeting was to examine the laboratory courses given at the university. Doctor Egloff was toastmaster at a banquet in the evening.

FIRST TAX EVADER PROSECUTED

The first criminal prosecution for evasion of Federal taxes upon gasoline has been ended successfully in Texas with the entering of a plea of guilty and the payment of taxes due by John Kraker, of the Lake Refining Co., Dallas, according to information reaching the American Petroleum Industries Committee.

It was said that Kraker originally was detected by state officials enforcing the new Texas gasoline tax laws, which make evasion a felony. An audit of his accounts revealed unpaid state taxes of more than $3,500. Kraker made a confession of his operations and reimbursed the state.

The case was one of several originating in the East Texas area and turned over to Federal investigators by the Texas comptroller's office. It is, however, the only one in which a confession was obtained and restitution made. The others, which have been in the hands of the Federal Government for more than a year, have not yet been presented to Federal grand juries.

Pledge Cut in Price if Gasoline Tax Is Reduced

Oil companies selling motor fuel in Michigan have inserted advertising in every daily newspaper in the state, in most weeklies, and in some other publications pledging that if the Michigan 3-cent gasoline tax is reduced to 2 cents per gallon, gasoline prices will be cut an equal amount the moment the lower tax rate becomes effective.

A proposal to reduce the state's tax to 2 cents is contained in one amendment to the state constitution upon which Michigan citizens will vote November 6. Another calls for reduction of motor vehicle registration fees, or weight taxes, to 35 cents per 100 pounds. Adoption of the amendments permanently would prevent increasing either tax rate.

"It has repeatedly been charged," the advertisements read, "that if the taxpayers of Michigan vote to reduce the gasoline tax, the oil companies would retain this money for themselves. To refute these charges, the undersigned hereby make this pledge to Michigan voters:

" 'Gasoline prices will be reduced the full amount of the tax reduction the moment the amendment (Amendment No. 2 on the November 6 ballot) becomes effective'."

The pledge was signed by 13 companies handling the bulk of the retail gasoline business in Michigan.

NEW REFINERY PRODUCTS

"Newer Products from Petroleum" was the subject of a talk given by Dr. Gustav Egloff, Universal Oil Products Co., Chicago, on Friday evening, October 26, before the Milwaukee section of the American Chemical Society.

The "newer" products he discussed are new and higher antiknock gasoline, new and more efficient lubricating oils and fuel oils of lower cold test and low viscosity which possess more heat units to the barrel.

High Winter Demand for Fuel Oil Is Anticipated

Prospects for a cold, stormy winter, predicted by many weather prophets, point towards a further upturn in the sale of fuel oils, according to representatives of this industry.

Last winter, which went down in history as a "memorable one," showed a business of 1,000,000,000 gallons of fuel oil in New York and New England alone. This figure may be exceeded this year, advance estimates show.

This billion-gallon business was divided among 500,000 oil burning homes and represented a 15 per cent upturn in sales over the previous year.

In this connection, it was recently announced that Socony-Vacuum Oil Co., Inc., which is one of the world's largest marketers of fuel oils, was embarking on its first extensive advertising program featuring this product. A comprehensive campaign will be carried on in 168 newspapers in New York and New England. The central theme, based on the results of a market survey, stresses prompt deliveries in all kinds of weather—made possible with 3,000 fuel oil trucks, according to company officials.

PURE PENN CASES

MONTREAL, Quebec, Nov. 3.—On complaint of the Pennsylvania One Hundred Per Cent Pure Oil Association, charges were heard in court here last week against three Montreal companies, accused of making false descriptions of oil sold here under the name of Pennsylvania oil. Oil and chemical experts from Boston and Pennsylvania testified.

Representatives of the Canadian Petroleum Co. pleaded guilty and were remanded for sentence. The Congress Oil Co. and Pennsylvania Gas Co. pleaded not guilty and are standing trial.

W. B. McClure, chemical expert of the Pennsylvania State College; D. W. Monroe, representative of the Pennsylvania Oil Association in Boston; and S. A. Hartwell, representative of the association in Oil City, Pa., testified for the prosecution in the case of the Congress Oil Co.

The contention was that the oil sold in Montreal by the three companies under the name of Pennsylvania oil was not 100 per cent pure Pennsylvania oil, and did not meet the requirements to carry the trade-mark of oil sold by the members of the association.

Counsel for the Congress Oil Co. secured an adjournment to call absent witnesses to prove that the oil sold by his company comes from Pennsylvania but is not treated there. He contended that though his clients do not belong to the Pennsylvania Oil Association the circumstance that the oil comes from Pennsylvania gives them the right to sell under that name. The prosecution, on the other hand, claims that some of the oil sold comes from New York and states other than Pennsylvania.

P H. Hertzog » » »

P. H. HERTZOG, in charge of sales for the Overton Refining Company and Kilgore Refining Company, with offices at Overton, Tex., has had the experience of actively marketing products in every important inland refining center in Texas. Beginning with the Burkburnett Field in 1920, Mr. Hertzog followed marketing opportunities to the Amarillo or Panhandle Field in 1924-25, was in West Texas from 1928 to 1929, in Del Rio, Tex., through 1929 and 1930, and moved to East Texas in the spring of 1930.

Mr. Hertzog's introduction to the oil industry was in 1918, when he joined the Midland Refining Company (now Skelly Oil Company) at El Dorado, Kans., as billing clerk. Shortly thereafter he joined the United States Army, Signal Corp, in which he served six months. He then returned to the Midland organization as salesman with offices in Fort Worth, Tex.

In 1926 he joined the Overton Refining Company interests, and at a time when refining crude runs of 700 barrels daily was considered a large amount for the company. At present the company and its associates own and operate two 3,000-barrel capacity refineries, together with a large number of producing wells and pipe lines and two gathering systems in the East Texas Field.

His friends know him as "P. H.," always ready to make a deal and he seldom leaves his busy office. His acquaintance among refiners and marketers extends throughout the Mid-Continent marketing territory.

He is married, has two sons, lives at present at Overton, Tex., is a Knight Templar Mason, and a member of Hella Temple, A.A.O.N.M.S. of Dallas.

Something New Centrifugal Mud Cracking Process ..helps Prominent Gulf Coast Drilling Contractor

An excellent help in "heaving shale"

EDWARDS DRILLING COMPANY, INC.
OFFICE 812 SECOND NATIONAL BANK BUILDING
CAPITOL 8013
Houston, Texas
November 2, 1934

H. L. EDWARDS
W. T. CAMPBELL

W. B. DUNN
D. C. BRAND

Mid-Continent Supply Company
Attn' Mr. D. H. Thornbury
3130 Navigation
Houston, Texas

Gentlemen:

Answering your request with reference to performance of the KENNEDYE CENTRIFUGAL MUD MACHINE recently purchased, we are pleased to report we have drilled 7000 feet in thirty-five drilling days which, while not a record, is very good time for a Wildcat well.

Before starting, the pumps were reconditioned with new MISSION valves, pistons, and rods, and in drilling 7000 feet no repairs to pumps were necessary. This is a record.

By constantly mixing and driving the good mud through a fine oil well screen, releasing entrained air and gas and rejecting coarse sand, shale, and the like, a very stable mud with low viscosity and no free water was obtained from native cuttings.

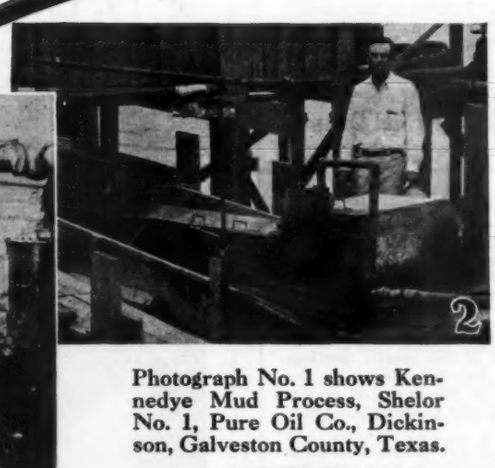
This process, while assuring us good mud and savings in pump parts, saves the producer considerable money in steam, purchased mud, and acids. I have recommended this process to several major companies who have been to see the installation.

Very truly yours,
H. L. Edwards
EDWARDS DRILLING COMPANY, INC.

Makes stable, homogeneous mixture from native cuttings.

★ Refer to pages 10 and 33 of this issue for further information.

H. L. Edwards, who for many years was Superintendent of Drilling for Humble Oil & Refining Company, knows Gulf Coast drilling conditions as few do. He takes the necessary precaution and gets them down.



Photograph No. 1 shows Kennedye Mud Process, Shelor No. 1, Pure Oil Co., Dickinson, Galveston County, Texas.

Photograph No. 2 shows Kennedye Mud Process, Yount Lee No. 11, Sweet Lake, La. P. G. Williams, Supt. Pure Oil Co., where 7594 feet of 10-inch casing was recently set.

SOLD EXCLUSIVELY BY THE

NRA

MID-CONTINENT SUPPLY CO.
REFINING · PIPE LINE · OIL & GAS WELL SUPPLIES
General Offices · · · Fort Worth, Texas

MEMBER AMERICAN PETROLEUM EQUIPMENT SUPPLIERS ASSOCIATION

K. W. DAVIS, President D. H. THORNBURY, Vice-President J. C. HALBERT, Secretary-Treasurer

Late Fields

MICHIGAN

MUSKEGON, Mich., Nov. 6.—Taggart Brothers, Inc.'s No. 9, on Oscar Schuberg lease, C SW NE Section 4-14n-9w, has been brought in with an open flow of 14,400,000 feet daily as an extension gasser in Austin Township, Mecosta County Field.

Muskegon Development Co.'s No. 1 Frank Estey, NW NW SW Section 28-22n-2e, was completed at 2,696 feet as a 70-bbl. Dundee producer extending the West Branch Township, Ogemaw County, deep pool.

OKLAHOMA

Lynch and others' wildcat test in SW NE SW Section 1-1-7, Pontotoc County, had Hunton lime at 3,829-85 feet, total depth. Oil appeared at 3,884 feet and filled the hole 500 feet in 20 minutes. The bailer was run five times without lowering the fluid level.

Enterprise Transit Co.'s (Kewanee Oil & Gas Co.) No. 2, SE cor. Section 34-26-6, South Burbank Pool, flowed 2,046 bbls. the first 20 hours and then 2,349 bbls. in a full day, or 4,395 bbls. in 44 hours, from Burbank sand at 2,790-2,871 feet.

Champlin Refining Co.'s No. 1, SE cor. Section 4-25-6, flowed 4,693 bbls. in 48 hours from Burbank sand at 2,690-2,723 feet.

Turman Oil Co.'s No. 1, C SW SW NW Section 29-8-4, Pottawatomie County, made 712 bbls. in a potential test from pay at 4,367-87 feet.

KANSAS

Tom Palmer's test in C SE SW SW Section 19-18-2w, McPherson County, Kansas, is a hole full of water at 2,428 feet (Kansas City lime), and will be abandoned. Same operator and others' No. 2, SW cor. Section 16-20-11w, Barton County, is a hole full of water in Siliceous lime at 3,355-60 feet.

Ickes Promises Live Talk Before Institute at Dallas

(Continued from Page 8)

things will not get out of hand in East Texas again, and will take any steps necessary to prevent such a condition arising. Norman L. Meyers, chairman of the Tender Board, flew to Washington during the week to report personally to Administrator Ickes, and presented an extremely cheerful picture of the situation.

He stated that "hot" oil had entirely dried up in the East Texas Field, and that the board had proved to his satisfaction that its actions were entirely legal. Requiring an interstate shipper to obtain a tender showing that the product was legally produced did not place an undue burden on the shipper, he claimed, nor were the actions of the board in any way discriminatory. For that reason he thought the board was safe from any ruling by the courts.

Test Suit Entered

His theory will be tested out shortly, however, as a hearing has been set for November 17, before Federal District Judge Bryant, to consider the questions raised in a petition for injunction brought to restrain the Federal Tender Board from requiring interstate shipments of petroleum and petroleum products to be accompanied by certificates of clearance before they can be accepted by the transporting agency for shipment.

A temporary restraining order was asked for by the petitioner, but this was refused by the court, which set instead the date of November 17 on which to hear the case on its merits and decide at that time whether or not the board's operation is legal. In the meantime there is no restriction whatsoever on the board's activities. They can continue as they have been, and the members are quite cheerful about the decision which they expect Judge Bryant to hand down.

At the same time the petitioner asked that several tank cars which had been halted through the action of the Tender Board be released, as the demurrage charges were mounting and there was some question as to whether they had been legally stopped. This request was granted by the court, but it in no way infringed on the right of the board to stop shipments of oil not accompanied by federal tenders, and to compel transportation agencies to accept only oil and its products so accompanied.

Mr. Meyers reported when he was here that only a small amount of refined products had been shipped interstate since the board began functioning, and that the records on that shipped were very closely scrutinized before tenders were issued. The co-operation of the railroads has been of extreme help to the board since its inception. All railroads have refused to accept for interstate shipment any petroleum products unless tenders covering the shipments were shown.

Arrested for Reports

While the board has been keeping busy the Department of Justice, represented by L. R. Martineau, Jr., special assistant to Attorney General Cummings, has been bringing to justice those who are alleged to have been consistent "hot" oil violators, as well as those who signed affidavits and statements fraudulently to assist in the movement of illegally produced oil.

As a result of this, four East Texas oil operators are under arrest on charges of making false statements in connection with alleged illegal production and shipment of oil. Three are charged with knowingly using false affidavits, which it is claimed were made by the fourth.

All four have been specifically charged with violating Section 35 of the United States Criminal Code which provides that swearing to any false affidavits or reports to any federal agency shall be punishable by a fine of not more than $10,000 and/or imprisonment for not more than ten years.

It has also been learned from the Petroleum administration that some of the so-called O.E.S. forms have been suspended, as it was felt that these were merely a duplication of reports demanded by the Federal Tender Board. The forms affected are O.E.S. Nos. 1, 2 and 6.

Appeal Vaught Decision

W. C. Lewis, Federal district attorney, at Oklahoma City, has received directions from the Attorney General's office in Washington to appeal to the U. S. Supreme Court from the decision by Judge E. S. Vaught, in which the judge held control by the Federal Government of oil production was unconstitutional. The appeal in the case, involving the Eason Oil Co. and the Crescent Pool development plan, will contend the Federal act is constitutional and applies both to interstate and intrastate operations.

Extensive Program Planned for A. P. I. Convention in Dallas Next Week

The petroleum world will move to Dallas, Tex., next week when the American Petroleum Institute will hold its fifteenth annual meeting there. General headquarters of the convention will be in the Baker and Adolphus Hotels but practically every hotel in Dallas has had every room reserved for the meeting for months.

Committee meetings will start Saturday morning, November 10, and will continue throughout the convention which ends Thursday night, November 15. In the interim will be held 2 general sessions, 8 group sessions, 46 committee meetings, 3 banquets, 3 luncheons, 12 dinners, 3 golf tournaments, and 15 sightseeing tours. On Friday, November 16, those attending the convention have been invited to a barbecue at Teague, Tex., the home of W. R. Boyd, Jr., executive vice president of the Institute.

Harold L. Ickes, oil administrator and Secretary of the Interior, and Amos L. Beaty, chairman of the Planning and Coordination Committee, will share honors at a special general session scheduled for November 14. Axtell J. Byles, president of the Institute; Mr. Boyd, Gen. Baird H. Markham, of the American Petroleum Industries Committee; and C. C. Chapman, author of the first gasoline tax law, will be the speakers at the first general session scheduled for Tuesday afternoon, November 13. At the group sessions leading engineers and technicians of the industry will present papers on subjects of interest to the production, pipe line, refining and marketing branches of the industry.

During the convention week, starting November 14, the congressional committee investigating phases of the petroleum industry with a view of recommending legislation to the next session of Congress, will hold hearings in Dallas. The committee will hold hearings in Oklahoma City on November 12 and 13 and then proceed to Dallas.

California is sponsoring an active movement to have the Institute hold its meeting next year in California and Tulsa oil men are going to Dallas with strong arguments as to why the 1936 meeting should be held in the Oil Capital.

Young and Denning Are Elected by A.G.A.

ATLANTIC CITY, N. J., Nov. 5.—Percy S. Young, vice president of the Public Service Electric & Gas Co., has been elected president of the American Gas Association for the 1934-35 term. Mr. Young

L. B. DENNING

has been associated with public utility work since 1890. L. B. Denning, president of the Lone Star Gas Co., has been elected vice president of the association and chairman of the natural gas department.

The following were elected directors of the association for two-year terms:

Addison B. Day, president and general manager, Los Angeles Gas & Electric Corp.; B. J. Denman, vice president and general manager, United Light & Power Co.; Henry L. Doherty, president, H. L. Doherty & Co.; O. H. Fogg, vice president, Consolidated Gas Co.; Arthur Hewitt, vice president and general manager, Consumers Gas Co. of Toronto; N. C. McGowen, president, United Gas Public Service Co.; William T. Rasch, president, American Gas Products Corp.; Thomas E. Roach, vice president and general manager, Washington Gas & Electric Co., and W. Frank Roberts, president, Standard Gas Equipment Corp.

Crude Prices Restored In Mid-Continent But Are Cut on Penn Grade

The three Mid-Continent oil companies that recently cut the price of crude have restored their prices making them retroactive to the day on which the cuts were made effective so that virtually there has been no break in the steady price schedule that has been maintained in the Mid-Continent for over a year.

The Atlas Pipe Line Co., which cut its East Texas crude oil price to 60 cents per barrel on October 22, restored the price on October 31 to $1, making it retroactive to the day on which the cut was made effective.

The Kanotex Refining Co. and the Globe Oil & Refining Co. on October 25 cut their crude oil prices 46 cents per barrel for each grade from below 30 degrees up to 40 degrees and over, but on November 6 restored them to the old basis with a top price of $1.08, and made the prices retroactive to the day on which the cuts had been made.

25-Cent Cut in Pennsylvania Grade

The South Penn Oil Co., Tide Water Oil Co., Bradford Transit Co., Pennzoil Co., Pure Oil Co. and other leading buyers of Pennsylvania Grade oil reduced their prices 25 cents per barrel effective November 6. Allegheny and Bradford oil was posted at $2.30 per barrel by the Tide Water Pipe Co. and Bradford Transit Co. Crude in National Transit lines $2.22. In Southwest Pennsylvania lines $1.97; in Eureka Pipe lines, $1.92; in Buckeye Pipe Line lines, $1.82. Pennzoil Co. lowered its prices in the Venango district to a range of $2.22 to $2.17 per barrel according to pipe line distance to Oil City.

Group 3 Market Hopeful But Not Overconfident

(Continued from Page 24)

turers do not find it profitable to make that grade unless they can get at least 50 per cent more for it than they can for the 26-70 to take care of stabilization losses. Most of the stabilized material bought by jobbers was 14-pound and 18-pound.

The North Texas market was slower than last week, but most manufacturers were trying to get 2¾ cents for the 26-70, though most sales were at 2⅝ cents. The lighter demand was attributed to reduced Gulf Coast purchases, caused in part perhaps by unsettled conditions in the eastern markets. The Oklahoma market was steady to firm.

Furnace oils, gas oils and distillates shared the upward price trend with the motor fuels. Kerosene was moderately stronger, with prices stiffening, and the movement was somewhat larger than that of last week. Lubricants were fairly steady and wax continued strong.

RETAIL PRICE CHANGES

(Continued from Page 28)

gasoline 4 cents in Rochester. October 29, reduced station gasoline 1 cent in Syracuse. October 30, advanced tank wagon gasoline 2.5 cents and station gasoline 3.5 cents in Boston. October 12, reduced tank wagon and station gasoline one-half cent in Portland. October 22, reduced tank wagon kerosene one-fourth cent in Burlington; October 23, reduced tank wagon and station gasoline one-half cent. November 3, reduced tank wagon gasoline 1.5 cents and station gasoline one-half cent in Metropolitan New York.

Imperial Oil Limited, November 2, reduced tank wagon gasoline 1 cent in Vancouver.

Standard Oil Co. of New Jersey, October 23, reduced tank wagon gasoline 0.7 cent and station gasoline 1.2 cents in Mount Airy; October 24, reduced tank wagon and station gasoline 0.1 cent in Columbia; October 27, reduced tank wagon and station gasoline one-half cent in Washington.

Magnolia Petroleum Co., October 27, reduced station gasoline 1 cent in Little Rock.

NEWS FOR PETROLEUM REFINERS

Standard Oil Development Company Effects Changes

With steadily increasing contacts and closer co-operation between the sales department and the Standard Oil Development Co. a re-alignment of responsibilities in the latter organization became necessary, according to The Lamp, news organ of Standard Oil Co. of New Jersey.

For the past year or so R. T. Haslam, vice president and general manager of the company, has been working closely with the sales department, particularly in the development of its lubrication division, leaving much of the active supervision of development company work upon R. P. Russell, general manager of the company's development division and of the Hydro Engineering & Chemical Co. Mr. Russell has now been elected vice president and general manager of the Standard Oil Development Co. Doctor Haslam, while remaining vice president and director of the company, will be free to devote more of his time to sales.

W. R. Carlisle, vice president of Standard-I. G. Co. and Dr. W. V. Hanks, head of the technical information unit of the development company and secretary of the technical committee, have sailed for London where they will be engaged in development company activities in Europe. W. Carl Winning comes over from Bayway to take over Doctor Hanks' work in New York.

The legal and patent departments of the company have been consolidated under the direction of W. E. Currie, vice president, and R. H. Dickson has been transferred to the new department. Dr. G. M. Maverick, manager of research and development activities at Bayway, has been transferred to the New York office to take over supervision of many of the general technical activities formerly coming under Mr. Russell.

To co-ordinate development work carried out by the Standard Oil of Louisiana for the development company's account, E. V. Murphree, formerly director of research and development at Baton Rouge, has been transferred to the New York office. D. G. Tomkins comes to "26" from Bayway and will be in charge of the general business and accounting office.

New Refinery to Process Big Horn Basin Crude

The Bruce Sullivan interests, which took over the Midland refinery in Denver about a year ago and purchased the Black Mountain holdings of the Utah Oil Refining Co. last spring, are planning on building a refinery in the field at Black Mountain or railhead at Lucerne or Thermopolis. The initial unit of the works will have a charging capacity of approximately 1,000 bbls. and will specialize in high quality gasoline and road oil. Their refinery at Denver has a charging capacity of about 1,800 bbls.

They have been trucking the oil from Black Mountain to Lucerne and then shipping it by rail to Denver. They will continue to operate the Denver plant after completing the Wyoming plant. Before taking over the Midland works, Mr. Sullivan operated in the Soap Creek Field in southern Montana and had a small refinery at Hardin, Mont.

The operating company in the Black Mountain Field is the Fern Oil Co. The field has six oil wells with an aggregate daily production of 1,300 bbls. and the company has been producing an average of about 600 bbls. daily. There is a storage capacity in the field at Black Mountain of 75,000 bbls.

Socony-Vacuum Ready to Market New Solvent Refined Lubricating Oils

NEW YORK, Nov. 3.—Starting the first of next week the Socony-Vacuum Oil Co., Inc., will start the distribution of a new motor oil throughout its entire marketing territory which includes most of the states of the East, Middle West, Southwest, West Coast and part of the Southeast. The company is the first major refiner to offer a new line of motor oils based on the solvent method of refining which is to be featured in its advertising and sales promotion.

This week approximately 100 representatives of various publications inspected the new equipment at the company's Paulsboro, N. J., refinery which has been manufacturing the new oils for several weeks. A similar unit is also in operation at the Beaumont, Tex., refinery of the Magnolia Petroleum Co., a subsidiary of the Socony-Vacuum. The two plants will furnish the new oils for the marketing department.

The company has adopted the name of Clearosol Process in explaining the method of manufacture, the name indicating a characteristic of the oil in which properties not desirable for lubrication are removed. Dr. J. B. Rather, head of the research department, which has had an important part in the development of the process for the Socony-Vacuum company, and W. H. Correa in charge of lubricating oil sales for the company explained the main features of the process and the characteristics of the oil. The process which was explained in detail in the October 4 issue of The Oil and Gas Journal, involves the use of two solvents—chrysalic acid and propane.

The features of the new oils which were stressed by Doctor Rather were:

Least possible change in viscosity within the temperature range of motor car operation.

Exceptionally favorable oxidation test.

Low pourpoint.

Low carbon residue.

Economy in consumption.

In explaining the process, Doctor Rather said in part:

"The last few years have witnessed a tremendous increase in power, speed and the reliability of automobiles. Even the less expensive cars are now capable of road speeds approaching 90 to 100 miles per hour and engine speeds of 4,000 revolutions per minute.

"At these speeds the pistons of the engine are traveling at the rate of 3,100 feet per minute, flame velocities past the exhaust valve stems of an automobile motor reach 100 miles per hour and valve stems reach temperatures of 700° F.

"Just as conditions of operation in modern automobile engines impose high temperature stresses upon the oil used, so also conditions of low temperature winter operation require that the oil preserve its fluidity at low temperatures.

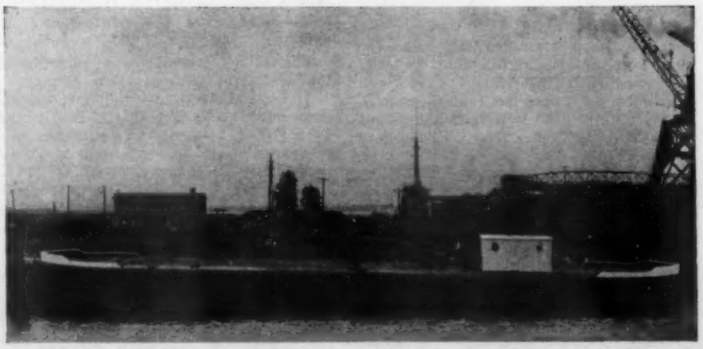
"In the past, the refiner was limited by both the crude petroleum and the refining methods available. No single crude possessed all of the desirable characteristics and no refining process could correct the shortcomings of the various crudes.

The Paulsboro unit represents an expenditure of approximately $1,000,000. The plant was built by the Lummus Co., New York City. The process is licensed by the Max B. Miller & Co., New York.

New Fuel Oil Barge Marks Increase in Great Lakes Oil Transportation

The first trip of the Fuel Oil Corp.'s new 185,000-gallon barge was made September 6. Launched August 24 by its makers, Chicago Bridge & Iron Works, this barge represents the latest development in all-welded vessels. It is 134 feet in length, 24 feet wide and 10 feet deep, and is equipped with a 500-gallon-per-minute gasoline driven Northern pump for unloading purposes.

The barge was taken to Toledo and its first load was 185,000 gallons of furnace oil from Toledo to Detroit. It is towed alone by a tug and will be used regularly between Toledo and Detroit and from Detroit for fueling dredges operating on the Great Lakes. The oil is supplied by Toledo refineries and is loaded through pipe line directly to the barge. In some cases the barge will be used to release larger ships for other work, so there is no direct reduction in transportation costs. At other times it will be used to deliver oil at a reduction in transportation costs.



New all-welded fuel oil barge built by Chicago Bridge & Iron Works

Sinclair Buys Richfield Properties on East Coast

LOS ANGELES, Nov. 5.—Consolidated Oil Co. and Cities Service Co., by an order issued by U. S. District Judge James in Los Angeles November 3, have purchased the total capital stock of the Richfield Oil Co. of New York for a consideration of $4,760,000. This represents a bid of $4,400,000 and an additional $360,000 to reimburse the parent company for advances made to the New York subsidiary.

The successful bid was made by Harry F. Sinclair and two representatives of the Consolidated Oil Co. in behalf of the Sinclair Refining Co., an affiliate of Consolidated. In entering the bid, Mr. Sinclair informed the court that Cities Service has an option to purchase 50 per cent of the capital stock of the Richfield Oil Co. of New York if it decides to do so.

Standard Oil Co. of California representatives contested the sale of the New York subsidiary, as the former has a standing bid of $23,500,000 for all assets of the parent company.

Representatives of Consolidated Oil Co. immediately entered a bid of $19,000,000 plus for the remaining assets of the company, or approximately $260,000 in excess of the Standard's bid. The sale of capital stock of the Richfield subsidiary was indorsed by the Richfield reorganization committee, the Richfield trustee, the Cities Service and several other interested parties. After sale of the Richfield Oil Co. of New York, it was indicated that Standard would revise its bid for the remaining assets of the California company, but counsel for the company would not definitely confirm this probability.

Sinclair company announced on Monday that there would be no change in the management, personnel or source of supply of the Richfield company as a result of the purchase. The products distributed by the Richfield company at present are furnished under contract by the Cities Service interests and the Sinclair company. According to the announcement the Richfield company will operate as a separate unit and there will be no disturbance of dealer and distributor relationships which the company intends to expand. The Richfield unit has its headquarters in New York. W. Chalmers Burns is president and general manager of the company.

The Richfield company markets in several states of the East and its gasoline gallonage at present totals approximately 165,000,000 gallons of gasoline annually.

It owns 200 service stations in addition to many dealer outlets. These facilities are supplied from four large water terminals and 32 bulk plants along the Atlantic Seaboard. The Richfield company in addition owns a controlling interest in the Tiona Refining Co. with a refinery at Clarendon, Pa., operating with Pennsylvania Grade crude oil.

MORE DIESEL-DRIVEN TRAINS

Oil-powered trains promise to be the rule rather than the exception in future years if the decision to build seven more high-speed trains may be taken as the index. The work is being hastened through the financing of the change by the P.W.A. Already $2,270,000 has been allotted for this purpose. The allocations were to five major railroad companies and are part of the $200,000,000 which P.W.A. has lent to railroads for improvements of all types.

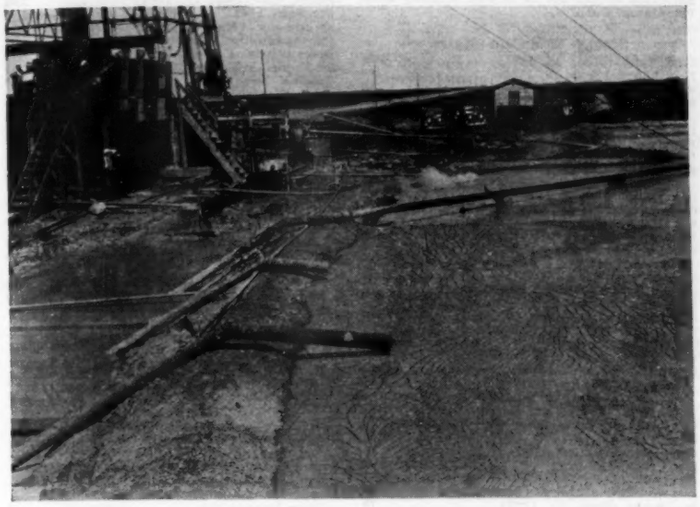
A $900,000 loan to the Baltimore & Ohio will be used largely for 16 specially designed coaches and one Diesel engine.

Gulf Coast Operators Consider Drilling Fluid

(Continued from Page 10)

ers especially for the pumps is a precaution which has been taken by Edwards Drilling Co. to insure sufficient power for any emergency that might arise.

A complete record of the condition of the mud has been kept by Edwards Drilling Co. At no time has the sand content been much above 5 per cent compared with much higher amounts usually unavoidable in muds on the Gulf Coast. Use of this system on this well has reduced the content from as high as 14 per cent. There also has been virtually no free water content which reflects the efficiency with which the system has provided a homogeneous, stable and colloidal mixture.



General view of mud system layout at Pure Oil Co.'s No. 1 Shelor, Dickinson, Galveston County, Texas. The refuse pit, into which all rejected materials are jetted, is shown in the right background. In the right foreground is a portion of the large earthen reservoir for the reserve supply of good mud. The working pits are at the left

Weight and Viscosity

Throughout the drilling, the mud has been carried at a weight of from 9.5 to 10 pounds per gallon with a viscosity of 25 to 40 centipoises. Use of such light weight and low viscosity mud has been feasible due to the effective consistency of the fluid made possible by the adoption of improved mud system facilities and methods. In earlier drilling practices it was customary to build up weight and viscosity of the fluid and no particular consideration was given other characteristics. In comparatively recent time, however, it has been learned that muds carrying larger percentages of sand, accumulations of small cuttings, free water and entrained gas or air have been responsible for the majority of drilling difficulties. Consequently, operators now are concerned with these elements rather than the weight of the mud. At the same time, it now is considered desirable to have mud as light and with as low viscosity as is consistent with the capability of the mud to bring cuttings to the surface readily and to offset any pressures in the formations.

Except for small shots of chemical on two different occasions, one when 500 feet of bentonitic formation around 6,200 feet was drilled and the other when casing was run, only natural mud has been used in this well. The chemical was made necessary because of the mud becoming too viscous on each occasion. The bentonite naturally swelled and resulted in a thickening of the fluid; likewise the running of the casing resulted in the scraping of the walls and excessive accumulation in the fluid.

Improved Facilities

Drilling of the well with its own mud was made possible by the ability of the improved mud facilities to make mud out of a much greater percentage of the cuttings than usually has been the case in conventional mud systems. Generally, a large part of the shales and many other formations are discarded as unsuitable, but by newer systems more and more of these can be reduced to such a state they can be mixed readily into a homogeneous fluid. In this instance, even the bentonitic shales are being made into good mud. The well has produced a reserve supply of good mud which so far has been more than adequate. The presence of a high-pressure gas sand has been proved, however, and this, with the depths expected to be drilled and possible "heaving" shale and other difficult drilling conditions, is occasioning particular precautions and attention to proper drilling mud in development of the Dickinson area.

Gasoline Association Starts New Research Program

(Continued from Page 13)

through large drums which are loaded by an electric dynamometer. The latter will control the speed of the drums and therefore the "speed" of the car while the drawbar pull of the car can be measured accurately by a balance. This procedure is preferred to that of testing of the engine itself because it eliminates the expensive and time-consuming operation of taking the engine out of the chassis of the car, and even more important, it gives a direct indication of the improved performance of the car. It is felt that this method of testing will be more satisfactory in showing the relative improvement, where it can be shown, than by testing the engine alone. This is due to consideration being given to the friction between the engine and the rear wheels, a factor which must be considered if the true output of the whole car is to be determined.

Doctor Brown is to be in Dallas during the A.P.I. convention, November 12 to 16, and will further explain the details of the project before a meeting of natural gasoline manufacturers to be held in the Baker Hotel, Wednesday afternoon, November 14. This meeting is being sponsored by the Natural Gasoline Association.

[1]The Potential Value of Motor Fuel as Determined by Octane Number and Total Volatility, by Dr. George Granger Brown and Clair A. Marshall, University of Michigan; Proceedings of the thirteenth annual convention of the Natural Gasoline Association of America, May, 1934, page 82. The Oil and Gas Journal, May 17, page 26.

[2]Effect of Gasoline Volatility on Engine Economy, by Neil MacCoull; S.A.E. Journal, Vol. 33, No. 5, November, 1933, page 362.

Rebuilding for profits —and safety

If you have a cracking plant whose performance disappoints you and whose gasoline disappoints your customers, don't keep on running it.

Don't scrap it, either.

Call Parsons.

Parsons will rebuild it in line with your special needs, to operate the Dubbs process under Universal license, fully protected by Universal's patents. He will salvage all he can with an eye to save you money.

Or, Parsons will design and build a new cracking unit with all the tried and true Dubbs features—and the latest Parsons features as well.

Built or rebuilt, Parsons units are economical, they are profitable and they are safe.

Patent lawsuits can't rob you of your profits.

Call Parsons.

PARSONS

THE RALPH M. PARSONS CO.

MT. VERNON, OHIO

Chicago Market Sentiment Continues to Turn to More Cheerful Views

By SPECIAL CORRESPONDENT

CHICAGO, Nov. 5.—A combination of bullish factors, developing abruptly, pushed gasoline and other products to higher price levels as the week opened, while general sentiment continued to turn to more cheerful views. Gasoline is tight and with buyers forced to go to older refining areas for material in place of East Texas, the immediate outlook is considered one of some strength. At the same time the trade is beginning to look forward to November 17, in connection with Federal court attitude toward the control of the Federal Tender Board on East Texas shipments.

It is believed troublesome questions relating to marketing, which have kept the trade stirred up, such as margins and differentials on independent brand gasoline, may reach satisfactory conclusion.

Movement Good

Movement of gasoline from refineries into the middle western trade area has been good—surprisingly good, according to some refiners. So far as it can be gauged, actual consumption also is running at good rates. Spot market buying by jobbers is still restricted. Contract orders are heavy. Jobbers are still keeping their stocks low, from all indications. Some dealers, however, who have large storage facilities, and who have kept stocks low due to late price cuts, are beginning to fill up on the theory that advances are near. Many rumors are in circulation about a substantial tank wagon and service station price advance, and these are given much credence here.

Dealer organizations in this area are up in arms over the definite recommendation of the stabilization committee for reduced margins. The members of the Chicago Service Station Operators Association have voted to renounce and withdraw from adherence to the code in case the provisions are made effective, and to supplant major company brands with their own brands. Inquiries among jobbers show they are adopting mostly a waiting attitude on the whole question of margins, although most of them are standing firmly against any plan which does not make it possible for the jobber to develop some assurance of a net margin of from 2 to 2½ cents, mostly the latter, as a guarantee.

Talk Normal Prices

With low octane motor gasoline once more not far from 4 cents a gallon, the trade in this region is again beginning to make calculations based on normal, or nearly normal, prices. The re-establishment of the 5-cent figure for major company purchases in East Texas is regarded as a gesture of confidence in trade conditions generally.

Higher gravity products are again receiving a little attention from the jobbers and dealers of the northern areas after a period of considerable lethargy. Prices are fractionally higher.

Heating Oils

With East Texas bottled up, little or no cheap heating oils are available. For the first time in a long period, in a period of comparatively mild weather, prices are stiffening rapidly. The pre-November consumption was not heavy, but fill-up business seems to have been good.

Industrial Oils

Industrial oils, with the exception of ordinary gas oil, are sluggish, but the gas oil mentioned is scarce and in some demand at noticeably higher prices. General industrial demand is still disappointing.

(Continued on Page 43)

Crude Oil Prices

(Continued from Page 27)

Humble Oil & Refining Co. and Texas Co. Effective September 20 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.96
Iles, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 9, 1933)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1933)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 3, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.08
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Ponders	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos, Urania, La. (Jan. 13, 1934)	.37
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.01
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co, Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc, and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co.; Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective Nov. 6, 1934)

Bradford, Pa.	$2.30
Allegany, N. Y.	2.30

SOUTH PENN OIL CO.
(Effective Nov. 6, 1934)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.30
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.97
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.92
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.82
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.83

PENNZOIL CO.
(Effective Nov. 6, 1934)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$2.32
Group B (Includes Titusville district.)	2.31
Group C (Includes Turkey and Tidioute districts.)	2.30
Group D (Includes Bear Creek and Porkey districts.)	2.19
Group E (Includes Elleneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	2.17

PURE OIL CO.
(Effective Nov. 6, 1934)

Cabin Creek, W. Va.	$1.92
Bradford Hollow, W. Va.	1.92
Kelly Creek, W. Va.	1.92

CREW-LEVICK CO.

Oil City-Titusville	$2.32

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	1.88
Midland, Mich. (Sept. 30, 1933)*	1.88
West Branch, Mich.	.84
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.23

*Posted by Pure Oil Co. and Simrall Pipe Line Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted prices. West Branch, Mich., posted by Simrall Pipe Line Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	$2.65
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.89

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$0.98

*F.o.b. ship, based on September transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.66	$.57	$.57	$.57	$.66
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.66	.65	.65	....	.66	....	....	....	.65
16-16.9	.66	.65	.72	.72	.69	.72	....	.69	.67	.68	.65	....	.66	....	....	....	.65
17-17.9	.69	.65	.75	.76	.72	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.66	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.93	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.96	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.99	.95	1.00	....	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.03	1.03	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1.15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 3, 1934, the following are the prices of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field; 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.13; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.03; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 2 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 34-34.9; Santa Fe Springs up to 35-35.9; Richfield up to 35-35.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 26-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 31-31.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 36 degrees and over; Seal Beach and Alamitos Heights, 34 degrees and over; Coyote Hills, 33 degrees and over; Richfield, 35 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 40 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

NATURAL GASOLINE MANUFACTURE

Seasonal Rise in Demand Cuts September Surplus

Natural gasoline production in California during November remained at the same level as the previous month—34,000 bbls. daily, but refinery utilization increased 3,000 bbls. daily and amounted to 27,000 bbls. daily. Shipments decreased from 2,000 to 1,000 bbls. daily. During the first nine months of 1934 as compared to 1933, very little change in the natural gasoline statistics are noted. Production was at the same level, 32,000 bbls. daily, while refinery utilization increased from 26,000 to 27,000 bbls. daily. Shipments decreased from 3,000 to 1,000 bbls. daily. During September, 1934, natural gasoline stocks increased 81,937 bbls. daily to 2,771,000 bbls.

NATURAL GASOLINE PLANT OPERATIONS
September, 1934

	Gas treated (M.C.F.)	Natural gasoline produced (gallons)
San Joaquin Valley:		
Elk Hills	72,378	134,084
Kettleman Hills	11,238,186	14,501,668
Midway-Sunset	1,299,977	2,666,475
Mountain View	111,683	131,884
Miscellaneous	433,098	461,908
Coastal region:		
Elwood	250,148	415,772
Rincon	65,318	65,620
Santa Maria	144,742	384,051
Ventura Avenue	2,953,978	3,324,372
Miscellaneous	219,845	247,289
Los Angeles Basin:		
Coyote	621,549	974,425
Domingues	670,663	1,367,899
Huntington Beach	2,365,057	3,365,424
Inglewood	121,546	183,903
Long Beach	1,953,293	6,170,031
Playa del Rey	169,887	531,163
Richfield	408,127	677,535
Rosecrans	486,658	625,185
Santa Fe Springs	2,846,480	4,820,621
Seal Beach	427,471	584,340
Torrance	111,602	232,113
Miscellaneous	246,589	755,123
Total (all fields)	27,218,275	42,655,885

DISTRIBUTION
(Gallons)

Stocks begin. of month	3,276,879	
Product'n during month	42,655,885	
Delivered to refineries		37,331,195
Deliv'd to jobbers, brokers or blenders		5,142,426
Blended at plants for prod. of motor fuel		3,165
Losses		62,601
Stocks end of month		2,393,377
Total (to balance)	45,932,764	45,932,764
Liquefied petroleum gas production (gals.)	745,583	
Motor fuel produced (gals.)	5,959	

SUPPLY AND DEMAND—SEPTEMBER
(Barrels)

Supply	Natural gasoline inc. lique. petrol. gas
Total production	34,446
Stock transfer (deliveries) receipts, net	(262)
Receipts and imports	
Current crude prod. trans. to "G" or "H"	
Net total	34,184
DEDUCT refinery requirements:	
Run to stills	2,712
Blended	24,694
Total	27,406
ADD refined output:	
Straightrun	
Natural gasoline, net	165
Cracked	
Less: Used for cracking	
Net refined production	165
Net current supply	6,943
Demand	
Domestic demand inc. bunkers	864
Shipments to Alaska and Hawaii	5
Rail and truck shipments to U. S. points outside Pac. Coast ter.	11
Demand in dom. market area	880
Shipments:	
Pacific foreign inc. Canal Zone	737
Atlantic foreign	
Intercoastal	
Total market demand	1,617
Losses (gains) unaccounted for, net	2,595
Total current demand	4,212
Surplus or (deficit)	2,731

Mathematics of Natural Gasoline Plant Operations Based on Simple Principles

The principle of material balance has wide possibilities in the solution of yields and product analyses in natural gasoline plant operation. The operator who is acquainted with the workings of this principle and who can handle theoretical problems possesses a valuable supplement to his practical knowledge.

To best illustrate the principle of material balance, a two-unit fractionation system is considered with the composition of the feed known. Assumed values are taken for the analyses of the three streams leaving the system. It is desired to determine whether these assumed values will result in a well balanced operation.

The basis of the input is 100 pound mols. x, y and z are the quantities of gasoline, also in pound mols, emerging from the system at the designated points. These are the values to be found. Material balance is based on the fact that all material entering a system (under normal distillation temperatures) leaves the system at some other point or points. Therefore, making a balance on propane, assuming conditions as stated in the accompanying drawing, the following equation may be written:

$$30 = .05y + .95z$$

For butane:

$$30 = .40x + .55y + .05z$$

For pentane

$$40 = .60x + .40y$$

Solving these three equations for the three unknown values:

$x = 62.5$ mols
$y = 6.3$ mols
$z = 31.2$ mols

For the values assumed, the streams from the system are unbalanced.

Another principle often combined with material balance is that of the corrected Raoult's Law. In dealing with hydrocarbons it was found that the value p in the equation was erroneous. Corrective values for this factor were determined and a new factor called "fugacity" was substituted in place of vapor pressure. Thus the equation became

$$xy = fx$$

The value y/x or f/x was found to be constant for specified pressure and temperature conditions. These constants "K" for the lower hydrocarbons have been plotted against temperature and pressure to make a series of charts. With the charts it is possible to find the "K" for these compounds at a wide range of temperatures and pressures.*

Consider, for example, a simple vaporization unit operating at 100° F. The desired overhead from this unit is as follows: Propane 50 per cent, butane 30 per cent, pentane 20 per cent. The problem is to find the pressure which will give these conditions. The first step is to use Raoult's Law with the vapor pressure p, to find the approximate pressure, π. In the problem,

$y_1 = .50$ $y_2 = .30$ $y_3 = .20$

From a vapor pressure chart the following values are found:

$p_1 = 180$
$p_2 = 44$
$p_3 = 12.5$

By applying the formula separately to the three components and substituting the following equations result:

$\pi = 360\,x_1$
$\pi = 147\,x_2$
$\pi = 62.5\,x_3$

Also

$x_1 + x_2 + x_3 = 1$

Solving, the value for π is 39.

With this approximate value, the next step is to apply the corrected formula to obtain the exact pressure. This is done in tabular form as follows:

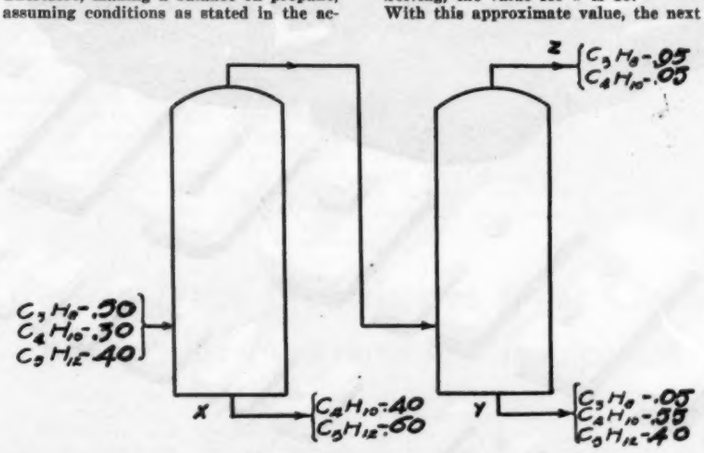
Assume $\pi = 40$

	y/x	y	x
Propane	3.80	.50	.132
Butane	1.27	.30	.236
Pentane	.41	.20	.488
		1.00	.856

Assume $\pi = 50$

	y/x	y	x
Propane	3.07	.50	.163
Butane	1.05	.30	.286
Pentane	.34	.20	.039
		1.00	1.039

The values for the pressure must be assumed until the total of the three values in the column at the right equals 1. The value for 50 lbs. is so close that that may be assumed the correct pressure.



Material balance around a two-unit fractionation system

This is the second article of a series dealing with theoretical problems of natural gasoline manufacture. The first appeared on page 30 of the October 4 issue of The Oil and Gas Journal.

*Vaporization Equilibrium Constants, a set of 8 charts by G. G. Brown, Chemical Engineer, Ann Arbor, Mich.

Spiner Is Named Manager Shell Company Advertising

L. H. Spiner, who since last February has been assistant manager of the sales promotion-advertising department of Shell Petroleum Corp., has been appointed manager of that department, succeeding Paul Ryan, resigned, according to an announcement by L. van Eeghen, vice president in charge of marketing.

L. H. SPINER

Mr. Spiner joined the Shell organization five years ago as a district manager in the Shellane division of the Technical Products department, subsequently being made sales manager, and then manager. His merchandising plans and distributing methods have been widely copied in the liquefied gas industry, in which he has been an important factor throughout its development.

IN FULL OPERATION

CALGARY, Alberta, Nov. 3.—Gas & Oil Products, Ltd., gasoline absorption plant on the Mercury lease, Section 4-19-2w5, in the South Turner Valley Field, is in full operation with an estimated daily recovery of around 500 gallons of naphtha.

SHELL GAS LIFT UNIT OPENS

Operation of a gas lift station owned by the Shell Petroleum Corp. in the Lucien Pool is expected to begin about November 8. The station, consisting of three compression units, will service about 25 wells in that area. A total daily throughput of 4,500,000 feet of gas will be handled. The production of gasoline is expected to reach from 4,000 to 5,000 gallons daily.

EAST TEXAS PLANT COMPLETED

Nine Oaks Gasoline Corp. (Prince Brothers) has just completed erection of a casinghead gasoline plant on the J. W. Orr tract in the J. Edwards Survey, in the Gladewater district of western Gregg County.

PHILLIPS BUYS FULL INTEREST

Phillips Petroleum Co. has purchased Forrest E. Gilmore's one-half interest in their jointly owned gasoline plant at Bryson in Jack County, Texas. This plant has been shut down for several months.

HERCULES
DIESEL ENGINES
● Simplicity . . . Compactness . . . Ruggedness . . . these are the heritage of Hercules Diesel Engines. Dependable, heavy-duty power for years has been characteristic of *all* Hercules Engine performance. Today, Hercules Diesel Engines are ably carrying on this Hercules Tradition.
HERCULES MOTORS CORPORATION, CANTON, OHIO, U. S. A.
MANUFACTURERS OF HEAVY-DUTY INTERNAL COMBUSTION ENGINES AND POWER UNITS FROM 6 TO 200 HORSEPOWER

Oil Markets of Manchukuo and Japan Involved in International Dispute

By C. O. WILLSON

NEW YORK, Nov. 5.—Official statements by the governments of Japan and Manchukuo indicate these countries have no intention of ending or modifying previously announced plans in regard to control of oil operations within their borders. The government of Manchukuo made known the plan which in effect will establish a state monopoly of the oil business in that country and Japan denied that the application of its new control law had proved unfair to foreign companies.

The actual situation in regard to oil operations has been overshadowed in newspaper and other reports by the political aspects of the Far East and the international angle of naval armaments. It is regretted in local oil circles that recent reports of diplomatic communications have created the impression that the issues involved in the present oil situation in Manchukuo and Japan are the same. This is not the case. In Manchukuo the government proposes to establish a complete monopoly of the oil business and if carried out as planned it will mean the end of private operations in that country. Under present plans the government will secure the bulk of the needed petroleum products from a refinery now under construction at Darien, a port on the Yellow Sea not far from Port Arthur. This refinery is owned by Japanese capital.

The fact that Manchukuo has not been recognized by the countries whose private interests are involved and the fact that the refinery is largely owned by Japanese capital has brought up the question whether or not the entire plan for government "monopoly" is not a violation of the "open door" in China guaranteed by treaties.

The situation largely hinges on whether this large area is to be considered Manchukuo, an independent country, or Manchuria, a part of China. At present the governments of the United States, the Netherlands and Great Britain are refusing to recognize the Manchukuo government and are insisting it is under control of Japan and that the latter is bound by the maintenance of the "open door" which includes the protection of foreign oil countries that in the past have imported and distributed practically all the products sold in that country. In its replies to diplomatic protests the Japanese government has taken the position that it has no control over the actions of the Manchukuo government and all matters pertaining to oil operations in that country should be taken up directly with government officials of Manchukuo.

In the case of Japan the only international question involved is the protection of foreign interests provided for in agreements with other countries. The right of the country to control oil operations within its own borders is unquestioned, including the power to impose duties, force large storage programs and make any other similar regulations the government considers necessary. The future of foreign oil interests is thus to a large extent dependent on negotiations with the government.

Consumption in Japan

It is estimated that Japan is now consuming about 22,000,000 bbls. of petroleum products annually. Based on 1933 operations this consumption is divided as follows:

	Barrels
Fuel oil (including Diesel oils)	12,300,000
Gasoline	5,700,000
Kerosene	1,500,000
Lubricating oil	1,500,000
Other oils	535,000

It is probable these figures on fuel oil do not cover all the supplies which have been purchased and stored by the government for its navy.

This consumption is not large when compared with demand data in the United States which show that states the size of Nebraska and North Carolina consume as much gasoline as Japan. However, in normal times markets in Japan and other parts of the country have been profitable and with the rapid rate of increase they are even more attractive. It is estimated that gasoline consumption in Japan this year is running 20 per cent ahead of 1933. The consumption at present is largely confined to taxicabs, buses and other types of commercial vehicles which are imported. The government is sponsoring the development of domestic plants to manufacture a low-priced car which will be within the reach of private owners. A large highway construction program is also under way.

At present the following companies are distributors in Japan: Nippon Oil Co., Ltd., Ogura Oil Co., Ltd., Mitsubishi Oil Co., Inc., Mitsui & Co., Ltd., Rising Sun Petroleum Co., Ltd. (Royal Dutch-Shell); Standard-Vacuum Oil Co. and Masukata Oil Co. The first three companies have refineries in Japan. The Nippon company has several small plants and is also the most important factor in the producing end. The Ogura company has one plant as has the Mitsubishi company in which the Associated Oil Co. of California is interested. The Mitsubishi company has one refinery. While the capacity of these refineries is small they are in most cases modern and have facilities for cracking as well as topping. The crude oil production in Japan is small and the bulk of the supplies for the refineries is imported. Available data show that Japan is dependent on outside supplies for approximately 90 per cent of its petroleum requirements either in the form of crude oil or finished petroleum products.

Mitsui & Co. is a distributing organization which handles the light products and lubricants of the Standard-Vacuum company and also obtains heavy products from the General Petroleum Corp. The Shell and Standard-Vacuum (Standard Oil Co. of New Jersey and Socony-Vacuum Oil Co., Inc.) are the principal distributors in Japan and import finished products from their large refineries in the Orient outside Japan.

The Masukata Oil Co., Ltd., is a newcomer in Japan owned by Japanese capital and distributing products obtained from the U.S.S.R.

The distribution of products in Japan for some time was handled through a cartel arrangement among the companies operating in that country. Considerable difficulty was experienced last year through the entry of the Masukata company which at that time was not a part of the cartel arrangement. Prices were slashed to unprofitable levels to meet this competition and have not fully recovered.

Last July the new government control law became effective and under the measure the government fixes the quotas for the individual companies. It is claimed that in fixing these quotas the government has favored the Japanese companies at the expense of the foreign companies, and this was the basis of complaint by the governments of the United States and Great Britain. It was this charge the Japanese government denied last week. It is claimed that under the quotas for the last of the quarter the foreign companies obtained practically the same gallonage as they had under the cartel, while the Japanese companies were given increases which absorbed the enlarged demand. It is feared this will be definite policy of the government so that the business of the foreign companies will be "frozen" while the domestic companies will show steady gains.

Another feature of the control act provides for storage. All importing companies by next March must provide for sufficient storage to cover their requirements for three months. By next October these inventories must be increased to six months supply. It is estimated in Japan that the carrying out of this program will mean an expenditure of 45,000,000 yen (approximately $12,000,000) for storage facilities over the next year. It is also provided that the government can take over this storage whenever it wishes at prices to be determined by the government. This last provision naturally has caused concern among the companies since they have no guarantee they will be reimbursed for the cost of oil in the event it is taken over by the government.

There are other provisions to the act which give preference in regard to duties and taxes to those companies which build and operate refineries in Japan over companies which import finished products. In this regard the Japan control act is similar to that under which France has built up a large refining industry during the past two years and which Italy now proposes to duplicate. The government also is offering an attractive proposition to companies which find new producing properties in Japan.

Provisions of Manchukuo Law

The consumption of petroleum products in Manchukuo is substantially less than in Japan, although there has been an increase in demand for practically all products this year. The following table gives the estimated annual consumption at present:

Products—	Barrels
Gasoline	260,000
Kerosene	357,000
Lubricating oil	83,000
Fuel oil	59,000
Grease (pounds)	2,200
Wax (pounds)	39,000,000
Asphalt (tons)	2,800

The three companies which import and distribute products in Manchukuo are the subsidiaries of the Standard-Vacuum Oil Co., Inc., Shell interests and Texas Corp. Since the new government was established some Japanese products have been imported with special concessions, it is claimed, in import duties and taxes.

In the statement issued last week the government asserted the monopoly was being established to aid in "stabilising national life and cultural development." It is explained that the primary purpose is to control marketing including the fixing of prices.

Russian Debt Negotiations May Open Market for American Oil Equipment

Negotiations for the extension of credits to Russia by the newly organized Export-Import Bank and for the establishment of reciprocal trade relations are understood to be nearing a conclusion, probably before the New Year.

Harold Denny, Moscow correspondent of the New York Times, cabled last week that "it is certainly true that both the Soviet and American Governments are drawing closer together on this one serious difference. Both sides wish to get together. One extremely well-informed diplomat told the writer he would not like to bet that there would be no settlement by January 1."

Alexander A. Troyanovsky, Soviet ambassador to Washington, recently returned to Russia, it is said, with a definite proposal from the U. S. Government for the settlement of all claims which this country and its citizens have against the Soviet. Because of the Johnson act, which forbids advances to defaulting nations, a necessary requisite to the extension of advances to Moscow for the purchase of machinery and supplies in this country is the settlement of all claims.

The most difficult obstacle has involved, it is said, the manner of treatment of the various claims of American citizens against Soviet Russia. These claims, excluding the loan of $187,000,000 by the U. S. Government to the Kerensky regime, are estimated at between $300,000,000 and $400,000,000.

The basis of settlement as proposed by the U. S. Government, the New York Times learns, includes the arrangement for the sale here of $200,000,000 of Soviet bonds with the understanding that all the proceeds of the issue will be used exclusively for the settlement of the private claims. The bonds, it is believed, will bear interest at the normal rate and probably will have a 10-year maturity. If a settlement is made a commission appointed by the U. S. Government will be set up to adjudicate the claims, and disburse the funds to the claimants.

Deposits and securities belonging to former Russian governments now in banks and other institutions in this country, it is said, will be used partly as collateral for the $200,000,000 Soviet loan. Inquiries already have been sent out by the State Department to banks and other institutions to ascertain the exact amount of bank balances and securities of former Russian governments held in this country. As regards bank balances, it is believed they represent a sizable sum, since there is a single account of $5,000,000 in one bank, deposited in 1916. At the time negotiations were under way for recognition of the Soviet by the United States, Maxim Litvinoff, commissar of foreign affairs, said the Soviet would not make a demand for these balances until a settlement of claims and counter-claims had been made.

The settlement of the claim of the U. S. Government growing out of its loan

(Continued on Page 43)

Applied Design and Economics of Pipe Lines

By FRANK R. YOUNG
Richfield Oil Co. (California)

Mr. Young, formerly assistant superintendent of the pipe line department of the Shell Oil Co., is now doing cost and industrial engineering work for the Richfield Oil Co. He has had wide experience in oil transportation problems and his development of pipe line design, costs and economics should be of particular interest to engineers and executives.

The design of a pipe line for transporting oil is now a comparatively simple matter. Thousands of miles of lines are in operation and, based upon years of experience, empirical formulas, tables and constants have been developed which render unnecessary any extensive delving into the theories of hydraulics.

Considering the volumes which have been written, and the wealth of material now available, it is perhaps not necessary for an engineer to go back to fundamentals in designing a pipe line for the transportation of a medium or low viscosity oil.

If the handling of a heavy, high viscosity oil is considered, the problem is not so simple. Heating must be resorted to and the line capacity will be greatly affected by temperature drop and variable friction pressure loss due to the change in viscosity.

In as much as the large majority of pipe lines are built to carry light refining crude oil, we will, for purposes of this discussion, consider an oil having a gravity of 20 to 30 degrees A.P.I., or higher, a viscosity at minimum pumping temperature of anything up to say 400 seconds Saybolt Universal. This specification will cover most of the crude oil produced in the United States.

Location Survey

Before commencing the design of a pipe line, the first thing needed is a survey of the ground over which the line will pass. This survey will cover both alignment and profile; that is, it will show a plan of the route and also the elevations. The survey will note all topographical features, streams, railroads, highways, fences, property lines, section corners, power lines, etc., with careful, accurate "ties" to each. Stakes are set along the line at 100-foot intervals or less. Elevations are taken at each 100-foot "station" or oftener, if necessary to show sharp breaks in the ground level. From the elevation notes, a profile is prepared which shows the ground elevations continuously from one end of the line to the other.

Ordinarily several preliminary lines must be run in order to determine the most economical route for the pipe line. As the field work progresses "field maps" are made up, but for the actual design a complete and accurately drawn map is usually prepared in the headquarters office so that the designing engineer can study his problem in detail.

In recent years, aerial mapping has been used extensively in conjunction with locating pipe lines. By the use of aerial photography the expense of surveying numerous alternative preliminary lines is eliminated, and in some cases locations have been made and rights of way purchased without ever having placed a survey party in the field.

Elevation and Power Profile

When the profile map has been completed, a second line called the "power profile" should be plotted, below the ground elevation line (see Figure 1). This power profile represents the ground elevations reduced to pounds pressure per square inch. If both ground and power profiles are plotted to the same datum plane, the power profile can be determined by multiplying the ground elevation (or static head in feet) by .434, which mathematically reduces the static head to pounds pressure.

The reasoning here is that a column of water 1 inch square and 1,000 feet high equals 12,000 cubic inches of water divided by 1,728 (cubic inches per cubic foot) equals 6.944 cubic feet of water. One cubic foot of water weighs 62.5 pounds, which multiplied by 6.944 equals 434 pounds of water. With 1,000 feet as the height of the column, the relation between pressure and feet head is, therefore:

$$\frac{434 \text{ pounds}}{1{,}000 \text{ feet}} = .434$$

With the power profile prepared we are now ready to consider the factors entering into the design of the line.

Friction Pressure Loss

The flow of liquid in pipes is caused by the difference in pressures on the liquid in the pipe. We may cause oil to flow in a pipe two ways, firstly, by gravity flow from a higher elevation to a lower, or, secondly, by applying pressure to the oil by means of a pump. In either case the result is the same, the oil flows from a higher to a lower pressure.

In flowing through a pipe, there occurs what is known as "friction pressure loss," that is to say, a certain amount of pressure is lost due to the friction between the oil and the walls of the pipe. This friction loss is a variable figure depending on viscosity of the oil, velocity through the pipe, and the roughness of the pipe walls.

In designing a pipe line system, therefore, this friction pressure loss must be determined closely if the line is to operate successfully and with proper economy.

A number of formulas exist by which pressure loss can be calculated. One formula is as follows:[1]

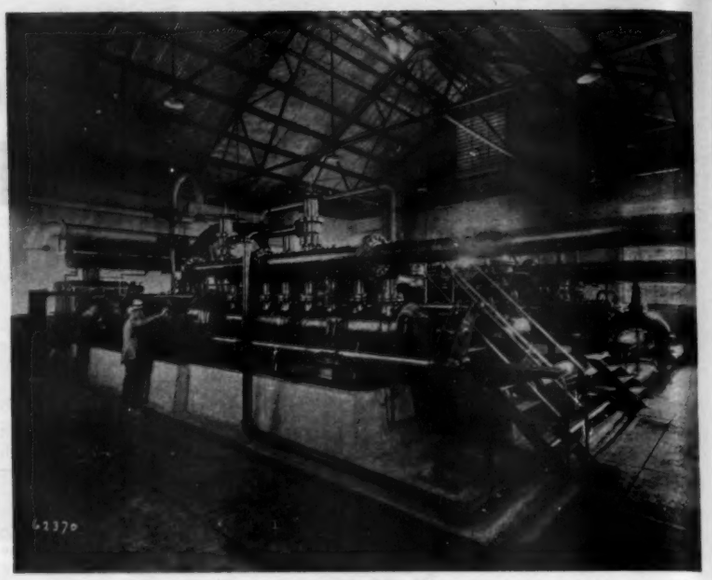
$$P = \frac{C\,G\,Q^2}{D^5}$$

in which

P = Friction pressure loss in pounds per square inch per 1,000 feet of pipe.
G = Specific gravity of oil.
Q = Gallons of oil per minute.
D = Internal diameter of pipe, inches.
C = Coefficient from following table.
$M = \frac{G\,Q}{D\,V}$ (from value found for M, look up the value of C in table below. Use value of C in formula above.)

V = Absolute viscosity = G (.0022 S $-\frac{1.8}{S}$).
S = Saybolt Universal viscosity.

[1]Friction pressure loss in oil pipe lines. Kinney Manufacturing Co.



"Crank and Flywheel" type steam driven reciprocating pump. This type is common in California practice where exhaust steam is used for heating oil

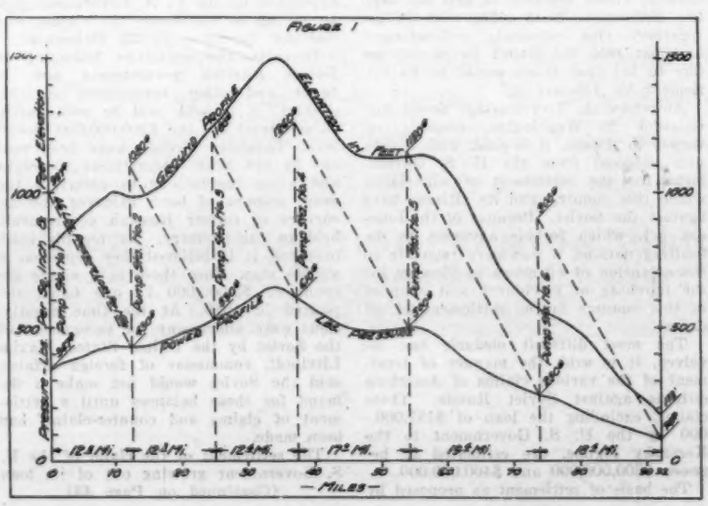


TABLE 1

M	C	M	C	M	C
10,000	0.190	750	0.355	85	0.600
9,000	0.195	700	0.360	80	0.550
8,000	0.200	650	0.370	75	0.500
7,000	0.210	600	0.380	70	0.460
6,000	0.220	550	0.390	65	0.425
5,000	0.230	500	0.395	60	0.450
4,000	0.240	450	0.400	55	0.500
3,000	0.250	400	0.415	50	0.550
2,500	0.260	350	0.430	45	0.600
2,000	0.270	300	0.440	40	0.675
1,800	0.285	250	0.460	35	0.775
1,600	0.300	200	0.480	30	0.900
1,400	0.310	180	0.500	25	1.100
1,200	0.320	160	0.515	20	1.350
1,000	0.330	140	0.520	18	1.500
950	0.335	120	0.550	16	1.700
900	0.340	100	0.555	14	1.950
850	0.345	95	0.570	12	2.200
800	0.350	90	0.585	..	.....

Stream Line and Turbulent Flow

At low velocity, oil flows through a pipe in an orderly "stream line" manner, variously termed, stream line, sinuous, or viscous flow. As the pressure is increased, a speed known as "critical velocity" is eventually reached where turbulent flow supersedes stream line flow. In turbulent flow the oil particles no longer flow smoothly through the pipe, but are turned inside out upon themselves in a swirling, eddying, confused movement, and the most noticeable indication of "critical velocity" is that considerable increase in line pressure does not result in increased flow. In the foregoing table it will be noted that the coefficient C corresponding to M 85 to 45 is calculated to take care of turbulent flow, so that, in the formula, the turbulent factor may be disregarded in calculating friction pressure loss.

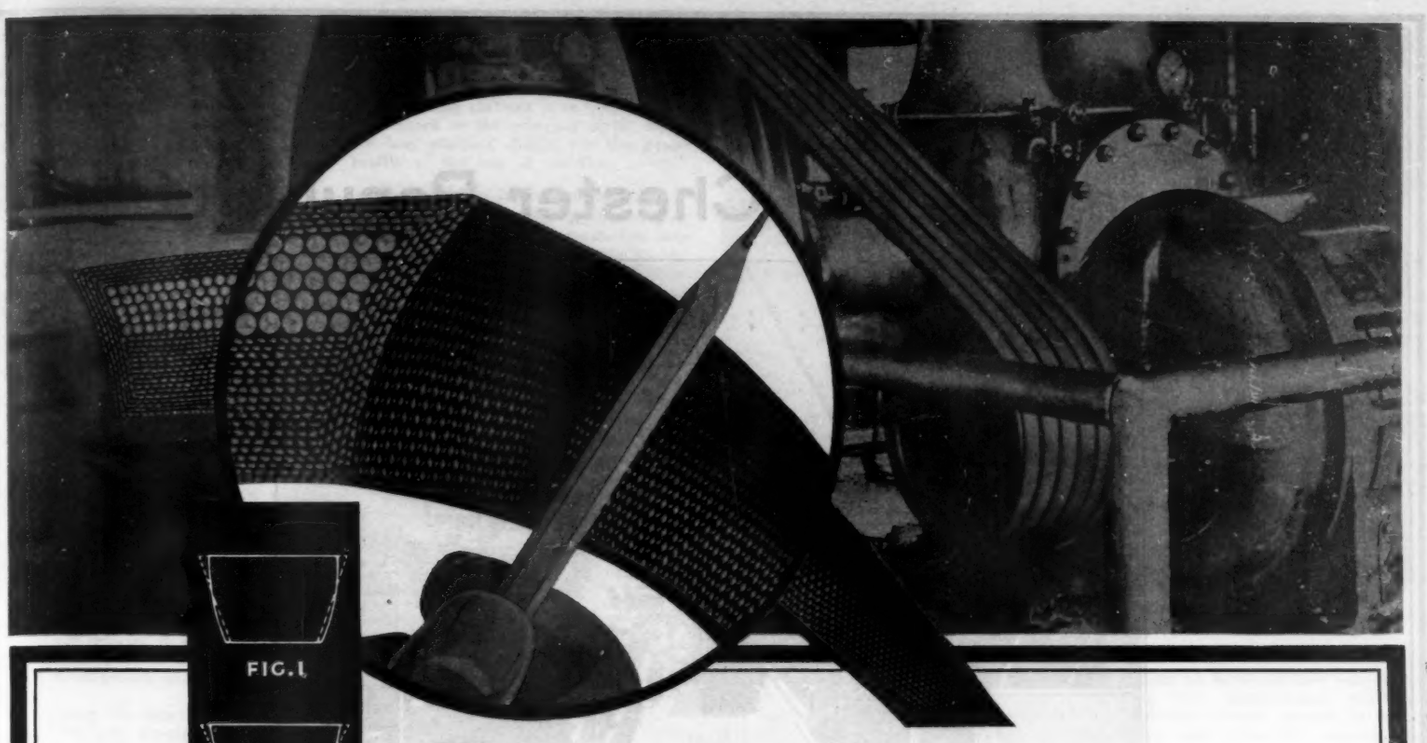
Pipe Line Design

Problem: Design a pipe line which will handle 30,000 bbls. per day. Oil is 28 degrees A.P.I. gravity, 130 seconds Saybolt Universal viscosity, specific gravity .887, working pressure of pipe 650 pounds per square inch, length of line, 92 miles, profile as shown in Figure 1.

The successive steps in the design, are:

1. Determine by formula or by curve the total friction pressure loss in handling 30,000 bbls. per day. Try various sizes of pipe until one is found which satisfies the maximum pressure requirement.

2. Deduct (or add) the static pressure difference between Pump Station No. 1 and the terminus of the line. This will give the net pressure to be applied by the pumps. Divide the net pressure by the pressure each pump develops. This



This Concave Side

Cuts Your Transmission Costs!

Watch any V-Belt in action and here is what you will see—

The top of the belt, as it bends around the pulley, is under tension and grows *narrower.* The bottom is under compression and grows *wider,* the sides of the belt *bulge out.*

A straight-sided V-Belt is therefore forced to assume, in the sheave groove, the shape shown by the solid lines in figure 1.

Two losses result:

(1) The bulging causes *uneven* wear on the sides of the belt—*shorter life!*

(2) The full side of the belt does not uniformly grip the pulley—lower transmission efficiency.

Contrast with this the belt built with the *concave* side (U.S. Patent 1,400,539)—the Gates Vulco Rope.

As this belt bends, the concave side becomes straight (Fig. 2). It *exactly fits* the sheave groove. Two distinct *savings.* (1) Wear is evenly distributed over the whole side of the belt—longer life! (2) Uniform side-wall grip on the pulley—no slip—*full delivery of power!*

WRITE *for Valuable NEW Book on Transmission—FREE!*

Engineering service and stocks available in all large industrial centers

MANUFACTURED BY THE GATES RUBBER COMPANY, DENVER, COLORADO

GATES VULCO ROPE DRIVES

More Proof of Chester Popularity

One of the many ships being loaded with 100% cargo of "Chester" Casing for the Oil Fields at our pier.
If you are looking for a pipe to stand up under severe drilling conditions try "Chester."

Chester also makes "Wrought Iron" pipe—manufactured from genuine old-fashioned hand-puddled muck bar made in our own mills from 100% pig iron.

SOUTH CHESTER TUBE COMPANY, Chester, Pa.

District Sales Managers

W. E. Gibson: 801 Columbia Bank Bldg., Pittsburgh, Pa.

H. A. Morse: 30 Church St., New York, N. Y.

J. P. Cooney: 715-716 A. G. Bartlett Bldg., Los Angeles, Calif.

J. P. Steele: 603 Petroleum Bldg., Ft. Worth, Texas.

District Offices

J. D. Swartz: 1231 S. Evanston St., Tulsa, Oklahoma.

E. L. Moseley: 2218 Mills St., Houston, Texas.

Burt S. Shafer, Southwest Representative: 4313 Fairfax Ave., Dallas, Texas or 603 Petroleum Bldg., Ft. Worth, Texas.

District Warehouses

Houston, Texas; Thenard, Calif.; San Francisco, Calif.

Distributors

United Pipe & Supply Co., Charleston, Danville, West Hamlin, W. Va.; Paintsville, Ashland, Allen, Prestonburg, Ky.

Prichard Supply Co., Manington, W. Va.; Mather and Waynesburg, Pa.

LeValley, McLeod, Kinkaid Co., Inc., Elmira and Olean, N. Y.

Kane Supply Company, Kane, Lawrenceville, Brookville, Pa.

Bovaird & Co., Bradford, Pa.

Western Supply Company, Tulsa and Oklahoma City, Okla.; Dallas, Houston, Pampa and Willow Springs, Texas.

Star Drilling Machine Co., 550 Clinton St., Portland, Ore., and Akron, Ohio.

Stephen H. McCabe, 506—4th St., San Francisco, Calif.

Bardo Steel Company, Seattle, Wash., and Portland, Ore.

Louisiana Supply Co., Sulphur, La., and Brimstone, La.

Dunigan Tool and Supply Co., Main office, Breckenridge, Texas. Branch stores, Willow Springs, Pampa, Turnertown and McCamey, Texas, and Hobbs, N. M.

Okmulgee Supply Corp., Okmulgee, Okla.

Oil Field Equipment Co., San Antonio, Tex.

CHESTER

STEEL CASING AND LINE PIPE

will show the number of pump stations needed.

3. Now plot the hydraulic gradients on the power profile to ascertain if any topographical features exist which will prevent the application of the calculated pressure loss. If the calculations are correct and the plotting carefully done, the last hydraulic gradient should cut the terminal point of the power profile and the pump stations will be properly spaced.

Development of Our Problem

Applying this procedure to our problem, we have:

First Step—By calculation or by curve we find that 30,000 bbls. per day through an 8-inch pipe line results in 8.7 pounds pressure loss per 1,000 feet of line.

8.7 pounds × 5.28 = pounds loss per mile.

45.94 pounds × 92 miles = 4,226 pounds total pressure loss.

Second Step—4,226 pounds — 273 pounds static difference = 3,953 pounds pump pressure.

$$\frac{3{,}953 \text{ pounds}}{650 \text{ pounds}} = 6 \text{ pump stations required.}$$

Third Step—Our power and ground profiles are referred to a common datum (zero, or sea level) so we may apply our graphic development directly to the same scale.

In plotting the locations of pumping stations for our six-station layout, we will, of course, have a pump at the initial point. The power elevation at the initial point shows 347 pounds, plus 650 pounds pump pressure, raises the pressure to 997 pounds. Plotting this point on the profile, we can visualize it as a tank of oil out of which we are going to drain 30,000 bbls. of oil per day. It is evident that more oil will drain out if the grade of the discharge pipe is at a very steep slope, than if it were set at a long flat slope. The friction pressure loss which has been calculated will determine the steepness of this slope.

We have found that our pressure loss is 8.7 pounds per 1,000 feet, or approximately 46 pounds per mile. For 10 miles the loss equals 460 pounds, so, if we subtract 460 pounds from our initial 997 pounds we get 537 pounds. We now plot 537 pounds, 10 miles out from the initial station and draw a line between 997 pounds and 537 pounds. This line is the hydraulic gradient, and if we extend it so as to cut the power profile, it will determine the point where the power will be zero, or where another pumping station will be required.

At No. 2 station we find the static pressure (in relation to zero datum), to be 430 pounds. Adding 650 pounds pump pressure to this we plot the resulting 1,080 pounds and then draw the hydraulic gradient as before, repeating this until our six pump stations have been located. As a check on the accuracy of the work, the last gradient should cut the power profile at the end of the line.

Looping and Equivalent Lengths

In plotting hydraulic gradients, care should be taken that the grade line does not cut below the power profile at any point. Should it do so, the gradient must be flattened enough to pass above all "peaks." This can be accomplished by reducing the friction pressure loss through "looping" or increasing the size of the line.

"Looping" consists of laying a parallel line a part of the distance and connecting both ends, thus reducing the pressure loss. Or, we may increase the diameter of the line to secure the same result.

In calculating a loop or diameter increase, it is convenient to use what is known as "equivalent lengths." That is, reduce the loop or increased diameter to the equivalent length of the size of pipe used as standard.

To obtain a factor for reducing any size or combination of sizes, add the 5/2 power of the diameters looped (or increased) and divide by the 5/2 power of the size selected as standard, then square the result.

Example: What is the equivalent length in terms of an 8-inch line, 16 miles long, of a loop of two 8-inch lines:

8-inch pipe = 7.981 inch inside diameter.

$$7.981^5 = \sqrt{32381} = 179.94$$
$$179.94$$
$$359.88$$

$$\frac{359.88}{179.94} = 2^2 = 4$$

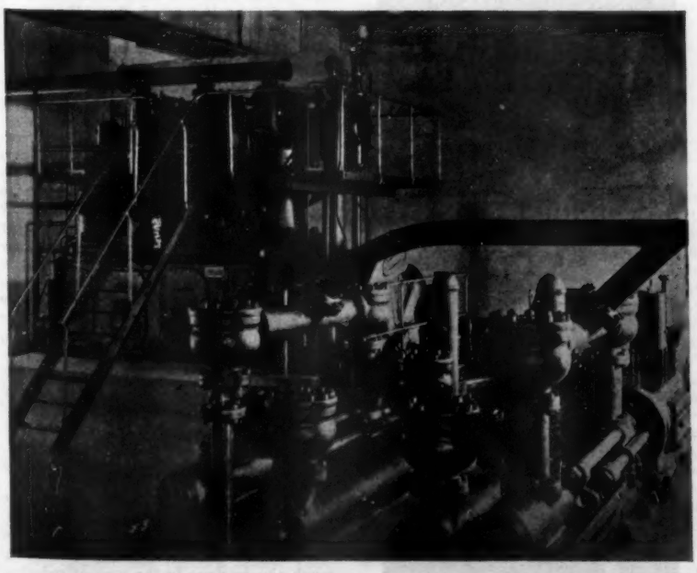
Therefore, 4 miles of single 8-inch is equivalent to 1 mile of double 8-inch, so 16 miles of single 8-inch equals 4 miles of double 8-inch.

The following table shows equivalent lengths of different sizes of pipe:

TABLE 2—PRESSURE LOSS EQUIVALENTS

2-inch	3-inch	4-inch	5-inch	6-inch	8-inch	10-inch	12-inch
1	7.32	28.05		30.32			
	1	3.89	12.04	7.76	30.61		
		1	3.10	2.51	9 88	30.85	
			1	1	3.94	12.30	30.33
					1	3.12	7.68
						1	2.46

Example: One mile of 6-inch is equivalent to 3.94 miles of 8-inch or 12.30 miles of 10-inch line.



One of the 300 H.P. Diesel engine-reciprocating pump units installed on Richfield's 10-inch Midway line from Elk Hills to Watson refinery

Centrifugal pump station electric motor and steam turbine driven pumps

Considerable ingenuity can be exercised by the engineer familiar with pressure loss equivalents. It sometimes happens that it is not advisable nor possible to install a pump station at the point indicated by the hydraulic gradient. Looping or increasing pipe size can be resorted to, which will allow the station to be placed further along the line than its theoretical establishment.

In designing a trunk pipe line system the greatest care should be taken to insure that the pump stations are properly spaced. Certain pipe lines now operating were not correctly designed with the result that one station perhaps does not maintain its share of the total maximum throughput. This means that the whole line is slowed down to the rate of the inaccurately located station, and the entire capital investment is therefore penalized to that extent.

When we arrive at the stage of designing the pump station our problems begin to multiply. In pipe line design we are dealing with mathematics and our decisions should be based upon law. The selection of pumping equipment, however, takes us into quite another realm. With several distinctly different types of pumps and prime movers available, the engineer will be called upon to decide between centrifugal and reciprocating pumps; between electric motors, Diesel engines, steam or gas (butane) engines; between direct-connected units, gears or belt drives.

The answers to all these problems will no doubt be arrived at only after careful evaluation of all the conditions contained in the problem. A survey of present trunk pipe lines reveals certain trends, and while it is perhaps impossible to generalize, we find steam plants used on pipe lines where heat is required for lowering the viscosity of the oil being pumped, also in remote places where electric power is not available.

Diesel power is used both for generating electric current which drives pump motors and also for direct driving of the pumps themselves.

Electricity is perhaps the largest source of motive power, particularly on trunk lines more recently installed.

Butane engines are operating in the Mid-Continent area, and their use appears reasonable, utilizing as they do a product probably not otherwise saleable.

Certainly no hard and fast rule exists regarding this pump/power problem; their selection should depend on costs, conditions and suitability inherent in each project.

Pipe Line Costs

The cost of installing a pipe line is another matter about which it is difficult to generalize. Costs vary considerably, depending upon many conditions, but if we assume for our 8-inch line an average figure of, say $1.65 per foot laid, including rights of way, we should have a cost suitable for our purposes.

At $1.65 per foot, our 92-mile pipe line (485,760 ft.) would cost $801,504.

If we assume that one pump station to handle 30,000 bbls. per day at 650 pounds pressure would cost $80,000, including cottages, the six stations would total $480,000.

Here again, generalities are unsatisfactory. A modern, high efficiency pump station, employing reciprocating pumps and Diesel engines might cost $200,000 or more. An electric driven centrifugal pump station might only cost one-fourth as much. Continuity of pumping, power cost and utility factor must be carefully taken into account before a decision can be made as to which type and cost are warranted.

Using the above figures, we have:

CAPITAL INVESTMENT

92 miles of 8-in. line at $8,712 per mile	$801,504
6 pumping stations at $80,000 each	480,000
92 miles telephone line at $600 per mile	55,200
	$1,336,704
Contingencies, 5 per cent	66,835
Capital investment	$1,403,539

Operating Cost

The daily operating may vary considerably owing to differences in power cost, taxes, overhead and accounting policy. The following discussion includes most of the elements of pipe line operating cost:

Superintendence—One superintendent, an assistant, an engineer at, say $900 per month, $30 per day.

Accounting and Dispatching—Two accountants and six dispatchers, $47 per day.

Maintenance and Repair—In the early years of the line this item will probably be low. Averaging, however, between early and late life, a crew of 15 men, including foreman, should take care of upkeep and repairs to pipe lines and pumps. Labor $96 per day, plus material the same, makes $192 per day total.

Line Riders—Two line riders at $5 each, plus car expense, makes $16 per day.

(Continued on Next Page)

Power—The formula for power requirement is:

$$\frac{\frac{\text{Gallons per minute} \times \text{lbs. pressure}}{1{,}714}}{\text{Efficiency \%}} = \text{H.P. required}$$

In our problem, 30,000 bbls. per day equils 875 G.P.M., so:

$$\frac{875 \times 650}{1{,}714} = \frac{332 \text{ H.P.}}{65\%} = 510 \text{ H.P. required}$$

The efficiency estimate of 65 per cent might be debatable. It includes motor, gear or belt and pump losses. Converting H.P. to K.W. we have 510 H.P. × .746 = 380 K.W. × 24 hours = 9,120 K.W.H. per day. At 1 cent per K.W.H. this amounts to $91 per day per station. $91 × 6 = $546 per day total.

Pumpers—5 pumpers at $7 = $35 per day per station.

$35 × 6 stations = $210 per day.

Pump stations are now being operated automatically. They can be arranged to stop and start themselves, and regulate their own pressures. This item, therefore, might be reduced to one or two men per station by an additional expenditure for automatic equipment.

Loss—Losses of oil due to leaks, line breaks and spills should not average over one-half of 1 per cent of the throughput. Five-tenths per cent of 30,000 bbls. equals 150 bbls., at $1 equals $150 per day.

Taxes, Insurance and Overhead—These items are variable. If taxes are estimated at 2 per cent of 40 per cent of the investment, we have $11,228 per year, or $31 per day. Insurance, say $20 per day; overhead, say $175 per day.

Interest on Investment—At 6 per cent, the interest on capital investment amounts to $84,212 per year, or $231 per day.

Amortization—The theory of charging interest on the investment and at the same time amortizing the investment in operating expense may be open to serious question. It is, after all, simply a conservative method of bookkeeping. Pipe lines are peculiarly subject to destruction of value. Oil depletion has caused the early demise of many a costly pipe line. Corrosion and obsolescence add their share to the hazards of pipe line investment.

It would be interesting to know what the present throughput percentage of the country's pipe lines is today in relation to the original volume they were designed to handle. I suspect that the percentage would be surprisingly low and the extent to which their original capacities have been reduced must reflect directly back upon the expected return on capital invested.

So far as physical aspects are concerned, any properly constructed trunk pipe line should be serviceable after 15 or 20 years of use. If we include the hazards of oil depletion, business risk, obsolescence and the remote possibility of some new source of cheaper power, then charging off interest, plus amortization, would not appear to be entirely unreasonable.

In our problem we will amortize the line in 16 years. The yearly write-off, therefore, will be $87,721, and the daily cost amounts to $240.

DAILY OPERATING COST

30,000 bbls. per day, 8-in. pipe line

Superintendence	$30
Accountants and dispatchers	47
Maintenance and repair	192
Line riders	16
Power—6 pump stations	546
Pumpers	210
Loss of oil	150
Taxes, insurance, overhead	226
Interest—6%	231
Amortization—16 years	240
Estimated cost per day	$1,888
Estimated cost per barrel	$.06293

Alternate Design and Estimate

Having arrived at a figure of $.06293 for transporting 30,000 bbls. per day through a six-station, 8-inch pipe line, let us see what would happen if we used 10-inch pipe instead. We know that 10-inch pipe will reduce the friction pressure loss and thereby reduce the number of pump stations with their attendant operating expense. A comparison based on the same reasoning used in the 8-inch design and estimate should tell an interesting story.

10-Inch Pipe Line

Without setting down in detail the various steps involved, the main points are as follows:

30,000 bbls./day through 10-in. line = 3.2 lbs. loss per 1,000 ft.

485.76 M ft. × 3.2 lbs. = 1,554 lbs. total pressure loss.

1,554 lbs. — 273 lbs. = 1,281 lbs. pump pressure.

$$\frac{1{,}281 \text{ lbs.}}{640 \text{ lbs.}} = 2 \text{ pump stations required}$$

CAPITAL INVESTMENT

485,760 ft. 10-in. line at $2.45	$1,190,112
2 pump stations at $20,000 each	160,000
92 miles telephone line at $600	55,200
	$1,405,312
Contingencies, 5 per cent	70,265
Capital investment	$1,475,577

DAILY OPERATING COST

30,000 bbls. per day, 10-in. pipe line

Superintendence	$30
Accountants and dispatchers	47
Maintenance and repair	150
Line riders	16
Power—2 stations	182
Pumpers	70
Loss of oil	150
Taxes, insurance, overhead	232
Interest—6%	242
Amortization—16 years	253
Estimated cost per day	$1,373
Estimated cost per barrel	$.04577

COMPARISON

Daily operating cost 8-in. line	$1,888
Daily operating cost 10-in. line	1,373
Saving in favor of 10-in. line, per day	515
$515 per day × 365 days = saving in one year	$187,975

From this we see that the lower operating cost of the 10-inch line with two pump stations will pay for its cost in savings in about eight years' time, as against the installation of the 8-inch line.

It is realized that some of the reasoning contained in this discussion is very debatable. We are dealing here with averages, if there are any averages, and if an engineer objects to an estimated 65 per cent efficiency on the pumping plant and claims that he is getting 85 per cent, no doubt he is correct. But a high efficiency pumping plant may call for a greater capital investment than has been used herein. The battle which rages about motive power, whether Diesel or steam, electricity or gas engine, is one which, in my opinion, must be settled after due consideration of all the facts.

It is well known to all engineers in the oil industry that the most difficult part of their work is to secure in advance, sufficient and correct information upon which to base their design. By the very nature of the oil business this must be true. What engineer has not, in times past, labored diligently and well in the design and installation of some facility, only to find out in a few years, or possibly a few months, that the brain child with which he struggled is woefully under or over capacitated?

The text books say little about this point, but as regards pipe line design, valuable conclusions can often be reached by a thorough examination into the preliminary problem. Perhaps greater understanding between the management and the engineers would help.

I have in mind particularly the situation when a request is received for "a line to handle 20,000 bbls. a day." Inquiry into details might reveal that 20,000 bbls. a day were needed for perhaps a few months, and that later the needed capacity might be only half that amount. In such cases temporary pump stations, high pressures, and high operating costs are warranted for a short period, as they will be offset many times later on by smaller investment and lower cost when things settle down to normal.

In considering the economics and design of pipe line installations, it is of the greatest importance, in my opinion, to classify, if possible, the line as (a) gathering line or (b) trunk line. Emergency measures, sometimes heroic, can be applied to hold down gathering line construction costs, while to a certain degree the other extreme may be good engineering and good economics when a main trunk line is being planned.

A main trunk pipe line which is carrying oil from a settled area to a permanent refinery, warrants, in my opinion, a generous expenditure in order to secure the best type of high efficiency machinery. We have seen in this paper how the expenditure of a little more capital will return the whole investment in 10 years through reduced operating costs, and were a permanent main trunk line being considered, no doubt even further economies could be made by installing more efficient equipment.

It now appears that for the moment the rush is over. There are in the United States many pipe lines which were built in the hectic days when the only thought was to "get it in" and which, in the light of what is now known, might with great profit be modernized.

One cannot do much with a pipe line that is too small, but fortunately perhaps, many of our lines are too large now, and with improved high-efficiency machinery much can be done in the way of reducing operating costs where long-lived operations are concerned.

Houston Chapter, Production Division, American Petroleum Institute, Formed

HOUSTON, Tex., Nov. 5.—Organization of a Houston chapter of the southwestern district, division of production, of the American Petroleum Institute was perfected at a meeting of approximately 75 oil and equipment men of that district October 30. Plans were laid for an active program of work and growth.

Following the election of an advisory committee, nominations of the latter for officers of the chapter were approved unanimously at the meeting. The officers are A. W. Thompson, drilling contractor, chairman; C. A. Warner, Houston Oil Co., first vice chairman, and Warren L. Baker, Gulf Publishing Co., second vice chairman. The office of secretary-treasurer, which is appointive by the chairman, has been filled by W. S. Crake, engineering department of Shell Petroleum Corp.

The advisory committee elected consists of M. L. Cashion, Gulf Production Co.; E. Stanley Durward, Shell Petroleum Corp.; Rex G. Hamaker, Reed Roller Bit Co.; S. S. Parker, Doheny-Stone Drill Co.; Hu M. Harris, Humble Oil & Refining Co., and Neil Williams, The Oil and Gas Journal.

The next meeting for the chapter has been called for November 20, at which time reports from the Dallas meeting of the American Petroleum Institute, November 12-15, will be heard. A movement already has been started by the chapter to obtain the next midyear meeting of the southwestern district, division of production and drilling practices for Houston.

The organization meeting was presided over by W. T. Doherty, assistant chief petroleum engineer, Humble Oil & Refining Co., chairman of the southwestern district, division of production, American Petroleum Institute, and W. V. Vietti, chief petroleum engineer, Texas Co., secretary-treasurer of the district, as secretary.

Mr. Thompson, the chairman of the chapter, has been active in American Petroleum Institute work in the Mid-Continent and Gulf Coast for many years. He was a member of the committee for standardization of rotary equipment of the Mid-Continent division for six years, secretary for two years, and for three years has been an active member of the southwestern division.

A. W. THOMPSON

C. A. WARNER

W. S. CRAKE

Independent Producer Says Exchange Would Benefit Petroleum Industry

By C. J. WRIGHTSMAN

An oil exchange is entirely logical and would ordinarily stabilize the price of oil through contacting the buyers of crude with producers who have no other outlets except those restricted to individual negotiation which frequently through lack of competitive bidding fails to bring a fair price for crude.

In fact an oil exchange means eliminating the below market selling of so-called "distress" crude and would tend to cause a premium to be offered for oil which might not be tied up by pipe lines and therefore would naturally stabilize both the crude and refined markets by affording a free and open market on a competitive basis for future production.

It is a logical contemplation that when a setup is afforded for an oil exchange through which crude is marketed, the pipe lines affected thereby will gladly afford requisite services to legitimate refiners. Large companies, as a whole, and most of the smaller units of the oil industry including pipe lines, refiners and producers are sincerely anxious to proceed with the legitimate policy of fairness and just treatment to all concerned to the end of stabilizing the industry and it should be observed that during this deplorable condition of hot oil that the finger of accusation could not be successfully pointed against any of the strictly Standard oil companies. They and several of the large independent companies have borne the brunt of the vicious price cutting.

C. J. WRIGHTSMAN

Mr. Wrightsman entered the oil business in Oklahoma in 1905; was active in the development of the Cushing and Glenn Pools, and for many years was an outstanding independent producer in the Mid-Continent area.

I know of no logical objection to a comprehensive plan for the selling of oil through an oil exchange.

Considering the tremendous investment in crude oil in comparison to the investment in coffee, sugar, copper, wool and many other commodities it is obvious that the precedent is well established for the successful operation of an oil exchange commodity market.

An oil exchange would lift the little producer out of the mud by always furnishing him a market for his crude oil. Past experience has shown we often had to run our oil into earthen tanks. There was no demand for local production. The great bulk of the demand was restricted to the larger companies. Under such circumstances distress oil did not quickly contact itself with small independent refiners needing it.

An oil exchange would benefit the small refiner in that it would provide an additional safeguard by preventing him from being shut out of a crude supply and affording him a free open market in which he might buy his full requirements.

An oil exchange would be of material benefit to an integrated company in the creation of a new means to take care of the distress production and the independent refiner respectively and would also relieve the companies of the economic inducement that now prevails to cut both crude and refined markets through the basis of acquiring distress crude at private bargains independent of the broad market value of such crude that the exchange would assure.

When the refiner must pay a fair price for crude he cannot undercut the refined price so greatly. The practice has been to steal the crude to save profits in cutting the market for refined products. In the final analysis these refiners without requisite distribution for their products must pass out of the picture. Such demise will be legitimate and beneficial. It is not just to its own that gambling promoters without substantial equipment and capital, who plunge into a new oil field, can enrich themselves by unfair practices.

The idea of an oil exchange comprehends adequate storage, financially able to perform all the services and duties of such storage facilities. An exchange would attract an additional flow of capital into the industry and facilitate the moving of production. It would provide additional insurance of oil in sight for the refiner, big or little, who needs crude beyond his present planning.

The immediate effect of an oil exchange would be a strengthening of the price structure. It would give immediate opportunity for the operator with mortgaged oil or distress oil to find a market for a daily production and to borrow on the basis of prevailing prices with a margin of safe security for his unrun oil. It would vastly increase the opportunity for bank loans to the oil industry through certificates as collateral security.

Operation of an oil exchange really should be more orderly than a grain market because crude oil would be available daily, whereas grains being a seasonable crop mature at certain periods of the year and the whole crop is available for market at one time.

In the case of a new field without pipe line facilities operators could ship their crude to storage of the exchange and thereby have a ready market for their production.

Should the time come in the future when this country needs oil from foreign fields the mechanism of an oil exchange would make available to the petroleum industry on an open market basis a crude oil supply for all without discrimination and would be a God-send to the refiner without an international contact. It means much to safeguard the investments of the stockholders in the sum total and the gigantic investment of the independent refining interests of the nation.

Through the medium of an oil exchange and the wealth which would be behind it, it would be possible to arrange for adequate production for future delivery from Russia and other countries to take care of our needs when our own fields are unable to supply our requirements.

In the case of war an exchange would provide a tremendous means to marshall quickly our resources under a capable, going organization.

Through its solidified economic power and strength the oil exchange would be a potent influence in creating a better understanding within the industry and in working out the problems of the industry in both domestic and foreign aspects and in solving problems that will constantly arise.

Debt Negotiations May Open Equipment Market

(Continued from Page 37)

to the Kerensky regime, it is understood, involves little difficulty. The Soviet government has a counter-claim against the United States resulting from damage done to Russia by sending the American Expeditionary Forces there in 1918. The counter-claim that will be ultimately allowed, it is stated, probably will be large enough to offset, or nearly so, the full claim of the U. S. Government.

Although the private claims amount to between $300,000,000 and $400,000,000, the belief is there will be no difficulty in settling them for $200,000,000 in cash. The fact that the U. S. Government agrees to arrange for the sale of bonds means that little difficulty will be encountered in their disposal.

Former Russian government bonds privately held in this country aggregate only $75,000,000. However, there is an additional loan of $11,000,000 which the banks advanced to the Kerensky regime, for which they did not receive definitive bonds because of the overthrow of that government. No interest has been paid on these loans.

The National City Bank of New York has a net claim of between $35,000,000 and $40,000,000 against the Soviet government growing out of the confiscation of its branch banks in Russia and the seizure of the cash on hand. Other companies having large claims against the Soviet include the Singer Sewing Machine Co., the International Harvester Co., Otis Elevator Co., and several of the Standard Oil group of companies.

The proposed bond issue of $200,000,000, it is pointed out, is simply to let Russia settle its claims to American citizens on reasonable terms. The belief is that if Russia attempted to settle the claims with its own bonds directly, it would require a much larger issue.

Credits granted for the purchase of machinery and goods here through the Export-Import Bank would be made on the merits of each proposition separately.

The amount of credit to be granted the Soviet in the event it accepts the debt settlement will be based entirely, it is said, on the amount of Russian imports to this country over a specified time, but not to exceed five years. The amount of gold that the Soviet will agree to send here also will be an important factor. The gold production of Russia is reported running in excess of $150,000,000 annually and the belief is that this rate could be stepped up moderately without much difficulty.

Russia's Capacity to Pay

The capacity of the Soviet for payment today, despite the world-wide depression, is believed greater than at any other time in its history. The total foreign commitments of the Soviet are placed at only approximately $200,000,000. In view of the vastness of its resources, this is considered a very small sum.

During the last few years Russia has been using its gold production to pay its obligations to Germany. Last year Germany imported from Russia 1,888,655 ounces, equivalent to $66,102,925 at $35 an ounce; in 1932, 2,232,657 ounces, valued at $77,142,995 at the new price, and in 1931 2,860,000 ounces, valued at $100,100,000. In spite of these heavy exports, the gold reserves of the Soviet State Bank increased from 16,925,700 ounces, or $592,399,500 at the present gold value, to 20,104,200 ounces, or $703,647,000 on January 1, last.

Russia's foreign obligations and its increased gold output indicate to many persons that it is in position to make substantial purchases in this country. Russian imports also, it is pointed out, could be increased considerably without displacing American products. These would include such items as furs, manganese, caviar, platinum and other miscellaneous articles not produced here. In some quarters it is believed that a credit grant for purchases of $500,000,000 in this country would be warranted.

In the event that the Soviet accept the proposal, it is understood that liberal credit facilities through the Export-Import Bank have been contemplated. The bank was formed for no other purpose than to increase the foreign trade of the United States on a practical business basis. It is now left with the Soviet government whether it wants to take advantage of the facilities of the Export-Import Bank, which it can do without sending over money for the settlement of claims and debts.

Machinery Needed in Russia

Russia is in the market for various kinds of machinery and equipment. It is understood to be greatly in need of additional railroad equipment, rolling mill machinery, farm machinery, oil drilling machinery and oil refining equipment. Also, it might be interested in buying considerable quantities of raw materials, including cotton and copper. Its purchases would be mainly from the heavy industries now much in need of additional business.

The export of oil products from Russia has decreased sharply in the last few years. In 1932 oil exports were 6,011,299 tons, in 1933 4,890,000 tons, and for the first seven months of this year 2,475,498 tons. The decrease was due to the lack of oil drilling and refinery facilities and not to the lack of demand for its oil from other countries. In this connection, it is pointed out that the various European countries are more interested in buying Russian than American oil because the Americans must be paid in dollars, while Russia will accept payment in every currency, including German "frozen" marks. Russia can use most any European currency for the payment of machinery, usually purchased in the country where the oil is sold.

In some quarters of the oil industry here it is believed that with the necessary oil drilling machinery and oil refining equipment the output of the Soviet could be increased by 300 per cent within a comparatively short period. Now the country actually is short of oil products. Within the past two weeks the Soviet purchased a cargo of gasoline here for export to Great Britain to fulfill a contract previously entered into.

Chicago Market Sentiment Continues More Cheerful

(Continued from Page 34)

ing for fuels. Higher grade fuels are being aided slightly in sympathy with other products.

Kerosene

Kerosene, especially better specification, seems to be growing scarcer. It has advanced a trifle. Of course, fall plowing demand is over for all practical considerations.

Lubricants

Lubricants continue mixed, but in somewhat better tone than many expected. The neutrals are reported rather scarce. Motor oil demand for winter is spotty.

Naphthas

Solvents and naphthas are marking time in a price way. Various types of demand are taking out fair quantities of material.

Wax

Demand for wax is hardly so active, but prices are fairly firm. Stocks are reported increasingly moderate. Better grades are attracting more interest.

Coke

Coke has been making relatively a good showing, with prices recently about unchanged. Supplies are kept in good control and demand appears of favorable proportions.

Wildcat Discovery Looming in Andrews County; Wichita Falls Gets 39 Locations, Panhandle 11

By L. E. BREDBERG

Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Nov. 5.—Another wildcat discovery is looming for Andrews County, in the Permian Basin. This test is appearing as the opener of the fourth producing area in the county, where all wells completed to date have been small and expensive to drill on account of depth and hardness of the lime formations.

This new well is owned by the Honolulu Oil Co. and Llano Oil Co. and is in Section 7, Block A-44, Public School Lands, on the J. E. Parker lands. It is approximately 5 miles southeast of the Deep Rock Pool and northeast of the Fuhrman wells. It was drilled 8 feet deeper from 4,619 feet. From 4,619-25 feet it encountered an increase in oil which rose in the hole at the rate of 1,500 feet per day, making it appear as sure of developing into a commercial producer. It is shut down waiting for storage to be erected, after which a test will be made. Elevation of the test is 3,194 feet. If it proves a good producer it will create additional interest in other tests now drilling in the county, and in acreage surrounding this area which includes the Deep Rock, Fuhrman and Means Pools.

Another test which has added interest since the showing in the Parker test, is Humble Oil & Refining Co.'s No. 1 B. S. Walker, in Section 6, Block A-43, west of the Parker test and between the Deep Rock and Fuhrman producers. It is drilling below 4,350 feet. To the east of the Parker test, Roland S. Bond and others' No. 1 McCarley, in Section 29, Block 3, University Lands, is drilling at 3,900 feet. This test will be closely watched when it reaches the depth at which the Parker test picked up the saturated lime streak. It is only 5 miles distant. Finding of oil in this test, and Humble-Walker test would open considerable acreage for drilling, the areas probably connecting.

Humble Oil & Refining Co.'s No. 2 Means, in Section 6, Block A-19, east of the Means discovery well, is now running tubing to 4,562 feet. Total depth is 4,562 feet, having plugged back from 4,623 feet to shut off sulphur water which appeared with the oil. The appearance of this test is now encouraging, looking like an east edge well for this new area. The same company is drilling a south offset to the discovery. It is down 4,112 feet and something interesting should be known about its possibilities within the week.

Ector County

Landreth Production Co. and Humble Oil & Refining Co.'s No. 1 Clarence Scharbauer, wildcat discovery well in Section 20, Block 44, Township 1s, T.& P. Survey, northwest Ector County, is plugging back from 4,236 feet, where it showed water, to 4,223 feet. As soon as the plugging job is completed it will be acidized. Before plugging back it swabbed 40 bbls. of oil and 4 bbls. of sulphur water in 24 hours, and is considered good for a small producer. It is approximately 5½ miles southeast of C. J. (Red) Davidson's small producer on the Cummins ranch. A test between the two wells would be exceedingly interesting, but location has not yet been staked in the area. Davidson is preparing to drill another test, to the northwest of his discovery.

New Producers

There were 11 new producers completed in the West Texas district during the week, adding 4,255 bbls. per day to the district's output. Ector had 3 of the 11 producers. Fisher County had one, which was an exceedingly good well on the east edge of the producing area in the northeast corner of the county, making 1,400 bbls. per day after acidizing. It is General Crude Oil Co.'s No. 2 Sipes, and is in the NW Section 195, Block 1, B.B.B.&C. Survey. Total depth is 3,073 feet, only 3 feet in the pay. This is one of the best wells completed in this area.

Howard County had two more producers, one wildcat and one extension well being completed in Jones County. The McElroy Pool, Upton County, got another well by Gulf Production Co., and Ward and Winkler Counties each had two producers. There were no dry holes in the district for the week. One of the wells completed in Winkler County was an old well deepened on the Walton ranch, in Section 19, Block 74. It made 30,000,000 feet of gas after deepening.

New Locations

Ten locations were staked in the district this week, one an Ordovician test in Schleicher County, which W. C. Proctor and others are to drill to 6,500 feet.

Barnes and others, of Abilene, have blocked 3,000 acres 4 miles northwest of Hawley and have contracted to spud a 2,000-foot test by December 1. Location of the block centers on the northwest corner of the J. Bartlett Survey, 1½ miles northwest of the King Pool, in Jones County.

Frank Oyster, of Abilene, is to start a 2,000-foot test by February 1, 1935, on a 714-acre block taken in the W. T. Scott Survey, which lies between the Higgs Pool and the new discovery on the Jones land.

Petroleum Oil Interests (Watt Brothers of Brownwood) have obtained a five-year lease on the entire A. Losoya Survey No. 515, consisting of 4,000 acres, lying about 5 miles northeast of the McMillan Pool, Runnels County, and are to drill a 2,600-foot test. They also have production in the McMillan Pool.

New Ordovician Test

F. C. Dodson of San Angelo has assembled a large block in Brewster County for an Ordovician test, the block being on what is known as the Hovey structure. Location will be in Section 65 or 66, Block 10, G.H.&S.A. Survey. Magnolia Petroleum Co. has purchased protection acreage in the block. This will make the ninth Ordovician test proposed, preparing to drill or drilling in the West Texas district.

Runnels County

The northwest edge of the McMillan Pool, Runnels County, appears to have been located by Agnew Oil Co.'s No. 1 Wade. 150 feet from the south line and 2,206 feet from the east line of Subdivision 10, N. Travis Survey 533. It encountered water at 2,560 feet after showing only a small quantity of oil in sand topped at 2,537 feet. It is only a short distance west of the nearest producer, which turned out to be but a small well. There are now 16 wells producing in this high gravity pool.

Winkler County

Sid Richardson's No. 1 Hill, in Section 18, Block B-11, east of the Halley discovery in Winkler County, is bailing oil and sulphur water at 3,260 feet, picking up the water from 3,208-20 feet. It may make a small producer when plugged back to shut off the water and given a shot or acidized. However, it is destined to be an east edge well.

Ward County

West Texas Oil & Royalty Co. has staked location for its No. 1-C University, in Section 6, Block 16, Ward County, which is between its first well drilled in this area, a semiwildcat, and production, therefore will be interesting.

Glasscock County

Currie and others have staked location for a wildcat in Section 10, Block 35, Township 4s, T.&P. Survey, southwest Glasscock County, about 9 miles northeast of a dry hole abandoned during the past two months by the same operator.

WICHITA FALLS DISTRICT

Fain and McGaha of Wichita Falls are still endeavoring to make a good commercial producer out of their No. 1 J. G. Thompson, in Section 44, Block 18, H.& T.C. Survey, in the Thalia area of Foard County. It was treated with 1,000 gallons of acid with a 130-bbl. oil load under 400 pounds pressure, but bailed only 200 bbls. of oil and 50 bbls. of water after cleaning out. It has now been plugged back to 2,085 feet for a second treatment. The oil showing is coming from a new pay horizon logged at 2,074-86 feet, and is of considerable interest to those operating or holding leases in the area.

McLester Oil Co. and States Oil Corp.'s No. 1 W. A. Pikard, located in the southwest corner of the C. M. Ribble Survey, Young County, logged an oil sand from 2,715-16 feet and made 10 bbls. of oil per hour with 1,000,000 feet of gas. Location is 1½ miles south of production and 3 miles southeast of Oil City.

H. H. Adams of Abilene is blocking 2,500 acres of leases in the old producing Desdemona Pool of Eastland County and is preparing to drill two Ellenburger tests. He is acquiring leases for production below the regular Desdemona producing horizon.

There were 39 locations staked in the Wichita Falls district during the week and 40 tests completed. Activities are on the increase in this district, which is considered the "poor boys'" district because of so many shallow producing areas and pay horizons which are drilled to with but little cost.

Pipe line runs from the district for the week averaged 60,960 bbls. per day.

PANHANDLE DISTRICT

There were 11 locations staked in the Panhandle district during the week and seven tests were reported completed, five oil wells, two gassers and one abandoned location.

Humble Oil & Refining Co.'s No. 1 Logan, in the Pedigo Survey, a wildcat discovery in Hutchinson County, still remains incomplete, although rated for around 100 bbls. per day after plugging back from 3,296 feet and shooting. Amtex Oil Co.'s No. 1 Stevenson, in Section 7, Block M-24, T. C. Survey, between the Logan discovery and the old Stinnett Pool to the south is also still incomplete. It was shot with 110 quarts from 3,210-40 feet and from 3,280-95 feet,

(Continued on Page 46)

Wildcat Operations in West Texas

Week Ended November 5

ANDREWS COUNTY

R. S. Bond et al's No. 1 McCarley, 1,320 ft. from N and W, Sec. 29, Blk. 3, P.S.L. Sur.
Drlg. 3,810.

Honolulu and Llano Oil Co.'s No. 1 J. E. Parker, 1,320 ft. from S line and 1,470 ft. from W line of Sec. 7, Blk. A-44, P.S.L. Sur.
T.D. 4,627 ft.; recemented csg.

Humble Oil & Ref. Co.'s No. 1 B. S. Walker, 660 ft. from E line and 660 ft. from S line of Sec. 6, Blk. A-43, P.S.L. Sur.
5,500,000 ft. gas at 4,208 ft.; drlg. 4,290 ft.

Humble Oil & Ref. Co.'s No. 2 Means, 1,980 ft. from S and 1,487 ft. from W, Sec. 6, Blk. A-19.
T.D. 4,623 ft.; P.B. to 4,562 ft.; shot 100 qts. 4,530-39 ft.; drlg. out bridge.

Humble Oil & Ref. Co.'s No. 2 Means, 660 ft. from N and 1,980 ft. from W, Sec. 11, Blk. A-35.
Derrick.

BORDEN COUNTY

Moore Bros.' No. 1 Clayton & Johnson, 1,320 ft. N and E, Sec. 29, Blk. 32, Twp. 4n, T.&P. Sur.
Location.

BREWSTER COUNTY

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,390 ft. from E of Sec. 31, Blk. 352, W. M. Mitchell Sur.
S. D. 2,100 ft.

King & Franklin's No. 1 Gage Est., C Sec. 138, Blk. 22, G.H.&S.A. Sur.
S.D. 341 ft.

COCHRAN COUNTY

West Texas Development Co.'s No. 1 Slaughter, C of Labour 53, League 159, Randall Co. School Lands.
Derrick.

COKE COUNTY

Wm. Hooper's No. 1 Gaston, 340 ft. from S line and 654 ft. from W line of Joseph Sur. No. 11.
S.D. 2,560 ft.

CRANE COUNTY

Continental Oil Co.'s No. 1 M. Dawson, 1,320 ft. from N and 440 ft. from E, Sec. 80, Blk. X.
T.D. 2,478 ft.; testing.

Loffland Bros. et al's No. 1 Tubbs.
T.D. 4,510 ft.

Strauss' No. 1 Phelps et al, 2,113 ft. from N and 713 ft. from NW Sec. 13, Blk. 31, H.&T.C. Sur.
Drlg. 510 ft.

CULBERSON COUNTY

Anderson-Pritchard Oil Corp., Magnolia Pet. Co. et al's No. 1 Borders, 1,255 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
Redrlg. hole at 350 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
Drlg. 1,980 ft.

World et al's No. 1 Hall, 250 ft. from S and 85 ft. from E. Sec. 11, Blk. 54½, 16 miles N of Van Horn, P.S.L. Sur.
S.D. 246 ft.

DAWSON COUNTY

Ray Albaugh et al's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 3,300 ft.

ECTOR COUNTY

Black et al's No. 1 Connell, 330 ft. from S and 2,310 ft. from W, Sec. 1, Blk. B-16, P.S.L. Sur.
Drlg. 1,880 ft.

Harrison et al's No. 2 Addis, 1,650 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Underreaming csg. 1,273 ft.

Landreth Prod. Co.'s No. 1 Johnson, 440 ft. from N and W, Sec. 47, Blk. 43, Twp. 1s. T.&P. Sur.
Underreaming at 1,130 ft.

Landreth Prod. Co.'s No. 1 Clarence Scharbauer, 660 ft. from S and E. lines of Sec. 20, Blk. 44, Twp. 1s, T.&P. Sur.
S.D. 4,236 ft.; swabbed 40 bbls. oil and 4 bbls. water in 24 hrs.

Stanolind Oil & Gas Co.'s No. 8 J. M. Cowden, 440 ft. from S line and 440 ft. from W line, Sec. 34, Blk. 43, Twp. 1n.
S.D. 380 ft.

Sunray & Llano's No. 2 Jones, 2,310 ft. from N and E, Sec. 6, Blk. 44, Twp. 2s.
Drlg. 200 ft.

(Continued on Page 46)

Rains and Hopkins County Tests Scratched Off; Pumper Completions Increase in East Texas

By L. E. BREDBERG

DALLAS, Tex., Nov. 5.—Two more areas were scratched off the possible producing list in East Texas this week when Rio Oil Co.'s No. 1, in the R. Hotchkiss Survey, Rains County, was abandoned at 4,353 feet and Hill and Hill's No. 1 Jones, in the Jasper Williams Survey, Hopkins County, was given up at 4,760 feet. It topped the Woodbine section at 4,555 feet. Neither was tested after showing salt water.

The wildcat of Cosden Oil Co. in eastern Henderson County, also looks "out of the picture" after coring red beds at 5,143 feet. It was reported to have topped the Woodbine at 4,849 feet, with an elevation of 450 feet. Above 5,143 feet it had about 30 feet of greenish sand which was reported to have carried some gas, but this did not prove of any consequence.

Fidelity Oil Co.'s No. 1 Holcomb, about 2 miles south of the Wood and Young discovery well in southern Cherokee County, had base of the Pecan Gap chalk at 4,415 feet, according to the driller, and is drilling shale below 4,435 feet. Jamison's No. 1 Mullineaux, in the T. M. Garrett Survey, 5 miles northwest of Maydell, in northern Cherokee County, is coring at 4,520 feet to check the formation. It was believed the base of the chalk was logged at 4,508 feet where there was a shale break. The other interesting test in the county is Stone and others' No. 1 Tullis in the William Johnson Survey, 5 miles south of Rusk and northeast of the Rusk discovery of Wood and Young. It logged base of the Pecan Gap chalk at 4,320 feet and is drilling at 4,335 feet. This is interesting due to its location in regard to the discovery around which no other producer has yet been drilled, one dry hole having been drilled by the discoverers to the southwest of their well. None has been drilled to the north of the discovery except one near the town of Rusk, about 6½ miles distant.

Anderson County

Gulf Production Co.'s No. 1 Davey and Royall, in the M. Rogers Survey, in what is known as the Camp Hill area, Anderson County, is drilling hard shale at 2,800 feet. This test showed considerable oil in the Queen City sand from 440-503 feet, but the company decided to pass up this showing for the present and drill to the Woodbine. If it does not prove a producer in the deeper horizon it may be plugged back.

Cauble and Thompson have staked location for their No. 1 Reed, in the F. Thweatt Survey, about 3 miles southeast of Greenville, in Hunt County. This was the only wildcat location staked in the district during the week.

E. L. Smith Oil Co.'s No. 1 Heimple, in the A. G. Smith Survey, 4½ miles south of Dew, in Freestone County, is drilling at 5,095 feet. Elevation is 492 feet.

Lee Dodwell and others' No. 1 Padasdna County, in the J. Graham Survey, Freestone County, topped the Austin Chalk at 3,600 feet and is drilling at 3,725 feet.

Several of these tests will either be written off the drilling report next week, if drilling is continued uninterrupted, or are due to show up as oil producers, all nearing the sand section in which oil saturation is found or salt water shows.

EAST TEXAS FIELD

There were 59 locations staked in the East Texas Field during the week and 70 tests completed, 1 dry. Three wells were completed as pumpers, one completed swabbing 25 bbls. in six hours and another swabbing only 20 bbls. in three hours. The number of wells completed as "pumpers" is gradually increasing, each week seeing several wells connected to "powers" or put on the "beam." The average bottom hole pressure may be decreasing at an exceptionally slow rate, but there are certain areas which have been badly hurt by heavy withdrawals and are showing the effects.

COMPLETIONS

Gregg County

Arkansas Fuel Co.'s No. 5-B Harrison, top sand 3,538 feet, total depth 3,560 feet, initial production 27 bbls., 15 minutes, 2-inch choke; No. 9-B McPherson, top sand 3,498 feet, total depth 3,523 feet, initial production 28 bbls., 15 minutes, 2-inch choke; No. 11 Rembert, top sand 3,463-88 feet, total depth 3,499 feet, initial production 27 bbls., 15 minutes, 2-inch choke. Atlantic Oil Production Co.'s No. 10-B Judge, top sand 3,493 feet, total depth 3,528 feet, initial production 155 bbls. hour, 2½-inch tubing. C. & G. Oil Co.'s (Pilot) No. 4 Bumpus, top sand 3,503 feet, total depth 3,531 feet, initial production 85 bbls. hour, 2½-inch tubing. E. X. A. Oil Corp. and others' (formerly Canadian), top sand 3,682 feet, total depth 3,719 feet, initial production 100 bbls. hour, 2-inch tubing. Joe Edgar's No. 3 Todd-Stinchcomb, top sand 3,541 feet, total depth 3,600 feet, initial production 90 bbls. hour, 2½-inch tubing. Gulf Production Co.'s No. 12 Bozeman, top sand 3,564 feet, total depth 3,594 feet, initial production 60 bbls. hour, 2-inch tubing. Hensley and others' No. 1 Wood, top sand 3,603 feet, total depth 3,605 feet, initial production 75 bbls. hour, 2-inch tubing. Humble Oil & Refining Co.'s No. 5 Adams, top sand 3,459 feet, total depth 3,495 feet, initial production 41 bbls. hour, 2-inch choke; No. 19 Armstrong, top sand 3,570 feet, total depth 3,597 feet, initial production 120 bbls. hour, 2inch choke; No. 30 Hughes, top sand 3,663 feet, total depth 3,696 feet, initial production 93 bbls. hour, 2-inch choke; No. 17 Lawrence, top sand 3,609 feet, total depth 3,656 feet, initial production 56 bbls. hour, 2-inch choke. Lucey Petroleum Co.'s No. 8 Fisher, top sand 3,560 feet, total depth 3,582 feet, initial production 20 bbls., 15 minutes, 2-inch tubing. Magnolia Petroleum Co.'s No. 8 Rodden, top sand 3,550-58 feet, total depth 3,562 feet, initial production 80 bbls. hour, 2-inch choke.

O. G. Murphy's No. 8 Doby, top sand 3,518 feet, total depth 3,578 feet, initial production 75 bbls. hour, 2½-inch tubing. Selby & Lewis' No. 7 A. Miller, top sand 3,588 feet, total depth 3,601 feet, dry and abandoned, salt water. Shell Petroleum Co.'s No. 11 Stinchcomb, top sand 3,456 feet, total depth 3,509 feet, initial production 22 bbls., 30 minutes, 2-inch tubing. Arkansas Fuel Oil Co.'s No. 18 Hughey-Ross, top pay 3,538 feet, total depth 3,563 feet, initial production 25 bbls. in 15 minutes. Christian and others' No. 2 fee, top pay 3,661 feet, total depth 3,665 feet, initial production 25 bbls. in two hours. Aaron Cohen's No. 3 Baptist Church, top pay 3,553 feet, total depth 3,630 feet, initial production 25 bbls. in two hours. Gulf Production Co.'s No. 17 Cole, total depth 3,528 feet, initial production 73 bbls. per hour; No. 61 Hilburn, top pay 3,559 feet, total depth 3,576 feet, initial production 66 bbls. hour; No. 19 Holt, top pay 3,627 feet, total depth 3,640 feet, initial production 68 bbls. hour. Kilgore Refining Co.'s No. 10 I.&G.N., total depth 3,597 feet, initial production 335 bbls. hour. Kingwood Oil Co.'s No. 7 Muckleroy, top pay 3,540 feet, total depth 3,565 feet, initial production 110 bbls. hour. Moss' No. 8 Marshall, top pay 3,617 feet, total depth 3,643 feet, initial production 100 bbls. hour. Navarro Oil Co.'s No. 6 Green, top pay 3,549 feet, total depth 3,575 feet, initial production 39 bbls. hour. Shell Petroleum Co.'s No. 41 Watson, top pay 3,571 feet, total depth 3,646 feet, initial production 40 bbls. in 30 minutes. Sinclair Prairie Oil Co.'s No. 5 Thomas, total depth 3,665 feet, initial production 25 bbls., six hours, swabbing. Sun Oil Co.'s No. 8 Brown, top pay 3,607 feet, total depth 3,657 feet, initial production 70 bbls. hour. Texas Co.'s No. 37 Cole, top pay 3,540 feet, total depth 3,553 feet, initial production 75 bbls. Tide Water Oil Co.'s No. 8 Bean, top pay 3,562 feet, total depth 3,628 feet, initial production 10 bbls., 10 minutes, 1-inch choke; No. 12 Lacey, top pay 3,544 feet, total depth 3,556 feet, initial production 13 bbls., 10 minutes, 2-inch choke.

Rusk County

Humble Oil & Refining Co.'s No. 128 Crim, top pay 3,615 feet, total depth 3,665 feet, initial production 74 bbls. hour; No. 134 Crim, top pay 3,574 feet, total depth 3,618 feet, initial production 104 bbls. hour; No. 28-A Laird, total depth 3,685 feet, initial production 105 bbls. hour; No. 62-B Laird, top pay 3,564 feet, total depth 3,633 feet, initial production 76 bbls. hour; Magnolia Petroleum Co.'s No. 13 Moore, top pay 3,661 feet, total depth 3,681 feet, initial production 20 bbls. in five minutes. Atlantic Oil Producing Co.'s No. 28 Kinney, top pay 3,585 feet, total depth 3,660 feet, initial production 42 bbls. hour. Bob Baker's No. 2 Neal, top pay 3,770 feet, total depth 3,820 feet, initial production 20 bbls. in 30 minutes. Deering and others' No. 2 Pinkston, top pay 3,528 feet, total depth 3,580 feet, initial production 20 bbls. hour. F. W. Fisher's No. 4-A Wilson, top pay 3,700 feet, total depth 3,740 feet, initial production 60 bbls. hour. Gulf Production Co.'s No. 12 Shaw, top pay 3,702 feet, total depth 3,707 feet, initial production 60 bbls. hour, three-quarters inch choke; No. 8 Thrash, top pay 3,707 feet, total depth 3,726 feet, initial production 60 bbls. hour, three-quarters inch choke. Humble Oil & Refining Co.'s No. 4 Alexander, top pay 3,697 feet, total depth 3,742 feet, initial production 8 bbls. hour; No. 5 Alexander, top pay 3,682 feet, total depth 3,742 feet, initial production 20 bbls. hour; No. 5-B Barksdale, top pay 3,586 feet, total depth 3,586 feet, initial production 20 bbls. hour; No. 7 Glover, top pay 3,665 feet, total depth 3,740 feet, initial production 33 bbls. per hour.

Hunt Production Co.'s No. 8 Thrash, top pay 3,679 feet, total depth 3,719 feet, initial production 40 bbls. in 13 minutes. Magnolia Petroleum Co.'s No. 2 McCord, total depth 3,596 feet, initial production 20 bbls., two hours, pumping. Marathon Oil Co.'s No. 7 Mills, top pay 3,640 feet, total depth 3,712 feet, initial production 40 bbls. per hour; No. 1 Pierce, total depth 3,613 feet, initial production 20 bbls. in three hours, swabbing. Petroleum Marketing Co.'s No. 4 Deason, top pay 3,660 feet, total depth 3,690 feet, initial production 25 bbls. in 15 minutes. J. Apple's No. 1 Moore, top pay 3,557 feet, total depth 3,663 feet, initial production 20 bbls. per hour, pumping. Shell Petroleum

East Central Texas Wildcats

Week Ending November 3

ANDERSON COUNTY

Gulf Prod. Co.'s No. 1 Dovey & Royall, 330 ft. from NE and NW of 172-ac. tract, M. Rogers Sur.
Cored 466-81 ft.; recovered 2 ft. dark brown, well saturated oil sand; drlg. 2,150 ft.

J. W. Luttes' No. 1 C. McKee, 2,640 ft. from N line of lease and survey and 330 ft. from W line of McKey 800-ac. tract.
Derrick.

Trinity State Oil Co.'s No. 1 Trinity River, 1,870 ft. N and 1,200 ft. W of SW cor. of Sullenberger lands. Wm. Snyder Sur.
Derrick.

BOWIE COUNTY

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
Rigging up.

CHEROKEE COUNTY

Fidelity Oil & Royalty's No. 1 Holcomb, 330 ft. from S line and 330 ft. from E line of 90-ac. tract, being Sec. 30, Z. Gibbs Sur., 2 mi. S old Goldston dry hole.
Drlg. 4,050 ft.

H. L. Hunt Production Co.'s No. 1 Powell Lumber Co., 467 ft. from S and W lines of 52-ac. tract, 1 mile E and one-quarter mile N of discovery well, D. W. McNab Sur.
Location.

Jacksonville O. & G. Co.'s No. 1 H. D. Henderson, 660 ft. from N and W lines of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur.
T.D. 752 ft.

Guy Jameson et al's No. 1 Mullineaux, cen. 20-ac. tract out of NW cor. of SE of T. M. Garrett Sur., 5 miles NW of Maydell.
Drlg. 4,300 ft.; base Pecan 3,590 ft.; elev. 342 ft.

South Gulf Oil Co.'s No. 1 Joe Bailey, center 164-ac. tract, 4 miles NE of Ponta. L. R. Rhodes Sur., Abstract No. 734.
T.D. 4,396 ft.; P.B. 4,185 ft.; swbd. S.W.

E. M. Thomason et al's No. 1 Addie Estate, 350 ft. S of survey and 150 ft. E of railroad, J. T. Jones Sur., 6 miles NW Alto.
S.D. 2,150 ft.

Wilson Stubbs Oil Co.'s No. 1 Rowhorts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur.
S.D. 1,550 ft.

ELLIS COUNTY

Beckner-Finley et al's No. 1 Coker, 2,900 varas along S line of grant from river and 1,700 varas N at R/A, R. De La Pena Sur.
S.D. 60 ft.

FALLS COUNTY

Eureka Drlg. Co.'s No. 1 L. Davis, 150 ft. N of Blk. 19, and 1,970 ft. W of Blk. 18, Zora League, 8 miles N of Marlin.
16 gallons oil per day at 1,020 ft.; drlg. 1,150 ft.

FREESTONE COUNTY

Burris' No. 1 R. J. Johnson, NE cor. of a 95-5-ac. tract, W. M. C. Jones Sur.
S.D. 1,000 ft.

Dodwell's No. 1 Pasadena, 660 ft. out of NW cor. of tract, J. Graham Sur., 2½ miles NE of Teagues.
S.D. 3,193 ft.

Goldston's No. 1 Watson, 1,450 varas from N and 1,150 ft. W of tract, P. D. Prince Sur., 5 miles NE of Fairfield.
Drlg. 3,850 ft.; base Austin 3,732 ft.

Hailey-Young's No. 1 Cochran, 400 ft. N and W lines, D. Bullock Sur., 1 mile SE of Lima.
Location.

E. L. Smith et al's No. 1 Heimple, 450 ft. out of NE cor. A. G. Smith Sur., 4½ miles S of Dew.
Elev. 492 ft.; drlg. 4,985 ft.

HARRISON COUNTY

W. G. Boyd et al's No. 1 W. L. Rudd, no check; in sec. of 360-ac. tract and sur. W. D. Perry Sur.
Rigged up.

HENDERSON COUNTY

Campbell and Chamberlain's No. 1 R. Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur.
S.D. 2,650 ft.

Cosden Oil Co.'s No. 1 Hunt & Miller, 990 ft. from N and 1,340 ft. from W lines of J. D. Hays Sur., 11 miles S of Chandler.
Top Austin 4,385 ft.; Austin 4,600 ft.; S.D. 4,980 ft.

(Continued on Page 47)

Corp.'s No. 16-B Brooks, top pay 3,654 feet, total depth 3,742 feet, initial production 23 bbls. in 30 minutes. Sun Oil Co.'s No. 23 Knight, top pay 3,623 feet, total depth 3,630 feet, initial production 68 bbls. hour. Texas Co.'s No. 10 Pinkston, top pay 3,619 feet, total depth 3,675 feet, initial production 23 bbls. in 30 minutes. C. H. Lyons' No. 1 Brown, top pay 3,690 feet, total depth 3,708 feet, initial production 60 bbls. hour. Ward Oil Co.'s No. 9 Giles, top pay 3,700 feet, total depth 3,730 feet, initial production 43 bbls. in 30 minutes.

Smith County

Magnolia Petroleum Co.'s No. 15 Loocier, top pay 3,686 feet, total depth 3,696 feet, initial production 24 bbls. in 15 minutes. Wainwright-West's No. 1 Jackson, total depth 3,773 feet, initial production 20 bbls., two hours, pumping. Bond & Dillar's No. 1 Mallory, dry and abandoned 1,580 feet.

Upshur County

Alma Petroleum Co.'s No. 8 Younce, top pay 3,694 feet, total depth 3,708 feet, initial production 20 bbls. in 20 minutes. Brown and others' No. 2 Landers, top pay 3,684 feet, total depth 3,696 feet, initial production 90 bbls. hour. Humphrey's No. 3 Johnson, total depth 3,664 feet, initial production 20 bbls. hour on air lift. Margay Oil Co.'s No. 7 Victory, top pay 3,623 feet, total depth 3,633 feet, initial production 125 bbls. hour. Simms-Stanolind Oil & Gas Cos.' No. 30-B Flewellen, top pay 3,716 feet, total depth 3,738 feet, initial production 60 bbls. hour. Wadley & Lyons' No. 4 Cocke, top pay 3,638 feet, total depth 3,642 feet, initial production 50 bbls. hour. Hodges' No. 1 Floyd, dry and abandoned 3,764 feet.

Fannin County

Keen and others' No. 1 Boyd, dry and abandoned 2,503 feet.

ROCKY MOUNTAIN RUNS

Estimated daily average production for the week ended November 3 follows:

WYOMING

Salt Creek	18,110
Big Muddy	1,750
Badger Basin	30
Black Mountain	140
Byron	430
Dallas Derby	560
Dutton Creek	70
Elk Basin	470
Ferris	40
Frannie	1,710
Garland	1,180
Grass Creek	shut in
Greybull	10
Hamilton Dome	390
Hudson	280
LaBarge	1,460
Lance Creek	230
Lost Soldier	1,690
Mule Creek	shut in
Midway	90
Notches	shut in
Oregon Basin	2,450
Osage	730
Pilot Butte	20
Rock River	1,470
South Casper	590
Poison Spider	240
Teapot	20
Total Wyoming	34,660

MONTANA

Buckley Border	250
Cat Creek	600
Cut Bank	4,000
Kevin-Sunburst	5,580
Lake Basin	40
Pondera	1,070
Total Montana	11,540

COLORADO

Florence	190
Fort Collins and Wellington	470
Iles Dome	1,590
Moffat	430
Orchard	110
Rangely	90
Tow Creek	160
Total Colorado	3,040

NEW MEXICO

Artesia	550
Cooper area	750
Empire area	100
Eunice area	3,470
Hobbs	32,370
Hogback	200
Hospah	shut in
Jal	3,090
Lea area	1,750
Jackson	1,500
Maljamar	370
Rattlesnake	720
Table Mesa	80
Total New Mexico	44,950
Total Rocky Mountain region	94,190

West Texas Fields

(Continued from Page 44)

filling 1,000 feet with fluid after the shot. These two tests are the most closely watched tests in the district.

WEST TEXAS COMPLETIONS

Ector County

Skelly-Amerada Petroleum Corp.'s No. 2-C University, top pay 3,534 feet, total depth 3,626 feet, shot 280 quarts from 3,450-3,625 feet, initial production 237 bbls. Humble Oil & Refining Co.'s No. 4 Jones, total depth 3,712 feet, shot 200 quarts from 3,660 feet, initial production 231 bbls. Sun Oil Co.'s No. 2 Wight, total depth 4,261 feet, shot 280 quarts from 4,130-4,261 feet, initial production 804 bbls.

Fisher County

General Crude Oil Co.'s No. 2 Sipes, top pay 3,070 feet, total depth 3,073 feet, initial production 1,400 bbls. per day after acidizing.

Howard County

Eastland Oil Co.'s No. 3 Chalk, top pay 1,795 feet, total depth 1,857 feet, initial production 120 bbls. Humble Oil & Refining Co.'s No. 7 Settles, top pay 2,265 feet, total depth 2,312 feet, initial production 28 bbls. first hour and 7 bbls. second hour.

Jones County

Byram and others' No. 1 Jones, top pay 1,930 feet, total depth 1,935 feet, initial production 100 bbls. Condor Petroleum Corp.'s No. 3 Sayles, top pay 1,885 feet, total depth 1,893 feet, initial production 18 bbls. per hour.

Upton County

Gulf Production Co.'s No. 104 McElroy, top pay 2,668 feet, total depth 2,789 feet, initial production 858 bbls.

Ward County

Gulf Production Co.'s No. 15 O'Brien, top pay 3,039 feet, total depth 3,110 feet, plugged back to 3,054 feet, initial production 30 bbls. per day.

Winkler County

Colonial Oil Co.'s No. 2 Scarborough, top pay 2,895 feet, total depth 3,098 feet, initial production 200 bbls. Magnolia Petroleum Co.'s No. 2 Walton, total depth 3,209 feet, initial production 30,000,000 feet of gas.

WICHITA FALLS COMPLETIONS

Archer County

Bridwell and Continental Oil Co.'s No. 14 Logan, top pay 1,141 feet, total depth 1,168 feet, initial production 10 bbls. Burns' No. 21-A Ferguson, top pay 647 feet, total depth 659 feet, initial production 3 bbls. No. 1 Skinner, abandoned location. Fain & McGaha's No. 21 Arnold, top pay 1,159 feet, total depth 1,173 feet, initial production 200 bbls. Gose and Waggoner's No. 2 American Refining Properties, dry and abandoned 1,126 feet. Grace and Wood's No. 2 Archer County, dry and abandoned 600 feet. Grisham and Dillard's No. 1 Archer County, dry and abandoned 3,748 feet. H. L. & H. Oil Co.'s No. 2 Archer County, top pay 941 feet, total depth 945 feet, initial production 25 bbls. Hammond Oil Co.'s No. 6 Abercrombie, top pay 1,149 feet, total depth 1,158 feet, initial production 15 bbls. Lanfair's No. 1 Bell, dry and abandoned 1,153 feet. Pace's No. 14 Abercrombie, dry and abandoned 1,505 feet. Perkins and Cullum's No. 1-B Abercrombie, dry and abandoned 1,328 feet; No. 16-B Falls County, top pay 1,112 feet, total depth 1,124 feet, initial production 150 bbls.; No. 25 Falls-Pitken, top pay 1,136 feet, total depth 1,159 feet, initial production 150 bbls. Petroleum Producers Co.'s No. 6 Harmonson, top pay 957 feet, total depth 967 feet, initial production 100 bbls. Texas Co.'s No. 1-D Wilson, dry and abandoned 1,645 feet. Underwood and Campbell's No. 5-B Campbell, dry and abandoned 1,032 feet.

Montague County

Beck's No. 8 Davenport, top pay 1,697 feet, total depth 1,730 feet, initial production 20 bbls. per hour, swabbing. Benton & Holmes' No. 4-B Davenport, top pay 1,689 feet, total depth 1,694 feet, initial production 25 bbls. per hour, swabbing. Continental Oil Co.'s No. 3 Lawler, top pay 1,712 feet, total depth 1,727 feet, initial production 30 bbls. per hour, swabbing. Continental Oil Co. and Seitz' No. 4-A Hott, top pay 1,621 feet, total depth 1,637 feet, initial production 35 bbls. per hour, swabbing. Leah and McCall's No. 1 Heiterman, dry and abandoned at 2,435 feet.

Wichita County

Continental Oil Co.'s No. 6 Cropper, top pay 1,354 feet, total depth 1,359 feet, initial production 1,500,000 feet of gas. Golding and Cochran's No. 2-D Wagoner, top pay 1,123 feet, total depth 1,129 feet, initial production 50 bbls. Petroleum Producers Co.'s No. 47 Allen & Kemp, top pay 1,491 feet, total depth 1,493 feet, initial production 10 bbls.; No. 50 Allen & Kemp, dry and abandoned at 474 feet; No. 51 Allen & Kemp, top pay 453 feet, total depth 462 feet, initial production 10 bbls. Swanner's No. 1 McCormick, top pay 1,246 feet, total depth 1,601 feet, initial production 20 bbls. Achning & Dudley's No. 1 Herron, top pay 1,045 feet, total depth 1,059 feet, initial production 10 bbls.

Wilbarger County

Consolidated and Cosden Oil Companies' No. 13-M Waggoner, dry and abandoned at 1,246 feet. Hamilton's No. 1 Waggoner, dry and abandoned at 1,259 feet. Phillips Petroleum Co.'s No. 2-H Waggoner, top pay 2,581 feet, total depth 2,585 feet, initial production 90 bbls. Texas Co.'s No. 11-D Waggoner, top pay 2,377 feet, total depth 2,389 feet, initial production 30 bbls. Waggoner's No. 1-B Waggoner, dry and abandoned at 2,584 feet. Luther Webb's No. 1-I Webb, dry and abandoned at 2,015 feet.

Young County

Bundy and others' No. 1 Young County Lumber Co., dry and abandoned at 686 feet. Butler and others' No. 2 Dyer, dry and abandoned at 622 feet. Holbrook and Woods' No. 1 Petty, top pay 816 feet, total depth 823 feet, initial production 10 bbls. Honea's No. 6 fee, top pay 905 feet, total depth 911 feet, initial production 22 bbls. L.E.H. Oil Co.'s No. 2 Manning, top pay 3,823 feet, total depth 3,989 feet, initial production 2,750,000 feet of gas. Tebay and Leberman's No. 1 Furr, dry and abandoned at 939 feet. Wood's No. 1 Farmer, dry and abandoned at 802 feet. Gilmore's No. 4 Drum, dry and abandoned at 540 feet.

Jack County

Kouri's No. 1 Bloodworth, dry and abandoned at 331 feet.

PANHANDLE COMPLETIONS

Carson County

Claude Drilling Co.'s No. 3 Byrum, abandoned location. Northern Oil Co.'s No. 3 Cooper, total depth 3,160 feet, shot with 270 quarts from 3,087-3,160 feet, initial production 518 bbls. Hagy and others' No. 6 McConnell, total depth 2,658 feet, initial production 91,000,000 feet of gas. Texas Interstate Pipe Line Co.'s No. 1-79 Burnett, total depth 2,665 feet, initial production 13,500,000 feet of gas.

Gray County

Cambrian Oil Co.'s No. 1 Saunders, total depth 2,915 feet, initial production 427 bbls. Shell Petroleum Corp.'s No. 2 Combs-Worley, top pay 3,036 feet, total depth 3,061 feet, shot with 120 quarts from 3,035-61 feet, acidized, initial production 180 bbls. of oil and 5 bbls. of water. Sun Oil Co.'s No. 4 Combs-Worley, top pay 2,902 feet, total depth 2,976 feet, initial production 698 bbls.

Wheeler County

Skelly Oil Co.'s No. 8 Derrick, top pay 2,450 feet, total depth 2,503 feet, initial production 343 bbls.

WEST CENTRAL TEXAS (RANGER) COMPLETIONS

Brown County

Sher-Ritt Oil Co.'s No. 2 Scott, total depth 1,950 feet, plugged back to 1,904 feet, initial production 45 bbls.

Callahan County

Beams and others' No. 10-D Jackson, total depth 1,188 feet, initial production 60 bbls. Ungren & Frazier's No. 1-G Jackson, total depth 888 feet, initial production 20 bbls.

Coleman County

Gutfey and others' No. 1 Gray, total depth 320 feet, initial production 500,000 feet of gas. Taylor-Link Oil Co.'s No. 4 Stewardson, total depth 1,725 feet, initial production 5 bbls. day.

Eastland County

Sinclair Prairie Oil Co.'s No. 7 Earnest, total depth 3,334 feet, initial production 15 bbls.

Shackelford County

Gilman & McMurry's No. 4 Morris & Buie, total depth 1,605 feet, initial production 20 bbls. St. Marys Oil & Gas Co.'s No. 5-A Davis, total depth 1,651 feet, initial production 2 bbls. Walker's No. 4 Walker, total depth 488 feet, initial production 2 bbls.

Throckmorton County

Bussey's No. 1 Martin, dry and abandoned 902 feet. Reliance Oil & Royalty Co.'s No. 2 Tuton, total depth 734 feet, initial production 3,000,000 feet gas. Michael's No. 1 Irwin, dry and abandoned 435 feet. Michael's No. 1 McKeichan, dry and abandoned 756 feet.

West Texas Wildcats

(Continued from Page 44)

EDWARDS COUNTY

Harry Adams' No. 1 Holman, 1,650 ft. from N and 330 ft. from E, Sec. 22, C.C.S.D. &R.G.N.G. Sur.
S.D. 540 ft.; show oil 520-25 ft.

EL PASO COUNTY

Mesa Oil Co.'s No. 1 Coronado Valley.
S.D. 1,415 ft.

FISHER COUNTY

Merry Bros. and Perrini, Inc., et al's No. 1 Dean, 660 ft. from S and E. Sec. 2, Blk. R., W. E. Richardson Sur.
Set csg. at 2,550 ft.

Roeser & Pendleton's No. 2 Hill, 2,310 ft. from N and 330 ft. from E, Sec. 203, B.B.B.&C. Sur.
Cellar.

Texas Co.'s No. 2 Daniels, 330 ft. from N and W. Sec. 194, Blk. 1, B.B.B.&C. Sur.
T.D. 3,111 ft.; pumped 196 bbls. oil and 110 bbls. water in 17 hrs.

Texas Co.'s No. 1 First National Bank of Rotan, 330 ft. N and E of the NW cor. of Sec. 210, B.B.B.&C. Sur.
Drlg. 3,236 ft.

GLASSCOCK COUNTY

Currie et al's No. 1 Currie, 330 ft. from S and W, Sec. 10, Blk. 35, Twp. 4s, T.&P. Sur.
Location.

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur.
Drlg. 6,391 ft.

Wahlenmaier Pet. Corp.'s No. 1 Boyd, 990 ft. from N and E, Sec. 9, Blk. 36, Twp. 4s, T.&P. Sur.
Drlg. 2,765 ft.

HOWARD COUNTY

Fred Hyer et al's No. 1 Clay, 1,310 ft. from N and 330 ft. from E, Sec. 126, Blk. 33, W.&N.W. Sur.
T.D. 1,562 ft.; cleaning out; T.P. 1,605 ft.

F. H. E. Oil Co.'s No. 2 Dodge, 330 ft. from N and 990 ft. from E, Sec. 15, Blk. 30, Twp. 1s, T.&P. Sur.
Machine.

Illinois Oil Co.'s No. 1 Logan, 990 ft. from N line, 2,310 ft. from E line, Sec. 2, Blk. 30, Twp. 1s, T.&P. Sur.
Shot twice; swabbed 127 bbls. in 24 hrs.

Iron Mountain Oil Co.'s No. 1 Read, 330 ft. from E line, 330 ft. from S line, Sec. 44 Blk. 30, Twp. 1s. T.&P. Sur
Drlg. 2,202 ft.; oil at 2,034 ft.

Mixon et al's No. 1 Capps & Lucas, 2,310 ft. from S and 330 ft. from W. Sec. 17, Blk 29, Twp. 1n. T.&P. Sur.
Set csg. at 1,330 ft.

Siegel's No. 1 Foster, 990 ft. from S and 330 ft. from W, Sec. 43, Blk. 33.
Spudded.

IRION COUNTY

Melrose Oil Co.'s No. 1 J. D. Sugg, 1,700 ft. from the E line and 305 ft. from the S line of Sec. 35, Blk. 2, H.&T.C. Sur.
S.D. 270 ft.

JEFF DAVIS COUNTY

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,332 ft. from E, Sec. 8, Blk. 3, H.&T.C. Sur.
Standard tools.

JONES COUNTY

Choate et al's No. 1 Faver, 170 ft. from S and E of Subdiv., A. Thompson Sur. No 30.
Drlg. 2,010 ft.
Condor Pet. Co.'s No. 2 Holt, 660 ft. from S and 330 ft. from E, Sec. 4, Blk. 20. Location.
Hammer & Beam's No. 1 Sheppard, 1,208 ft. from N and 200 ft. from E of 160-acre tract, D. Minter Subdv. No. 53.
Drlg. 985 ft.
Ray & Staniforth's No. 1 Stewart, 600 ft. E of Texas Inland Oil Co.'s No. 1 Inland.
Drlg. 850 ft.
Richards et al's No. 1 Ransom, 200 ft. from N and E, Sec. 244, B. M. Clopton Sur.
Spudded and S.D.
Southern Oil Co.'s No. 2 Cade, 330 ft. S and 990 ft. E in Sec. 17, Blk. 19, T.P. Sur.
Drlg. 2,020 ft.
Texas Inland Oil Co.'s No. 1 Boaz, 330 ft. from N and W of N 311 acres of S 611 acres, John Wall Sur. No. 272.
S.D. 2,455 ft.
Texas Inland Oil Co.'s No. 2 Sellers, 640 ft. from N and 200 ft. from W, Wm. Delb Sur. No. 241.
T.D. 1,886 ft.; plugged back to 1,878 ft.

LOVING COUNTY

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 11 Blk. 57, Twp. 1, T.&P. Sur.
Drlg. 2,038 ft.

PECOS COUNTY

Adams et al's No. 1 Schearer. Location.
Adams et al's No. 1 Masterson. Location.
California Oil Co.'s No. 24 Yates, 160 ft. from E line and 20 ft. from S line, Sec. 34, Blk. 194, G.C.&S.F. Sur.
Drlg. 1,282 ft.; oil 1,179 ft.
Broum & Collett's No. 17-E Tippett, 150 ft. from E line of W half and 730 ft. from N of No. 5-E, Sec. 40, Blk. 194, G.C.&S.F. Sur.
S.D. 484 ft.
Gulf Prod. Co.'s No. 2 White and Baker, 330 ft. from N and E of Sec. 42, Blk. 194 G.C.&S.F. Sur.
Drlg. 1,420 ft.
Gulf Prod. Co.'s No. 3 White & Baker, SE cor. of N half Sec. 4, Block 207, T.C. Ry. Sur.
Drlg. 210 ft.
C. S. Messenger's No. 2 Rand Jones, 1,935 ft. from S line and 1,613 ft. from W line of Sec. 5, Blk. 9, H.&G.N. Sur.
Drlg. 2,087 ft.
Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec 37, Blk. 40, Twp. 9, T.&P. Sur.
S.D. 1,301 ft.

REAGAN COUNTY

E. P. Kirschner and White's No. 1 W. A. White and McIntosh, 720 ft. from E and 800 ft. from N of Sec. 1,225, E.L.R.R. Sur
S.D. 3,165 ft.
Skelly Oil Co. et al's No. 1-D E. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 32, Blk. 8, University Land Sur.
Drlg. 5,770 ft.
Williams et al's No. 1 Scott.
Drlg. 2,730 ft.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft. from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur.
Recemented csg. 1,576 ft.

RUNNELS COUNTY

Agnew and Currie's No. 1 H. E. Wade, 2,640 ft. from N line and 320 ft. from E line of Sec. 24, Domingo Diaz Sur. No. 582.
Drlg. in 2,455 ft.
Hall Oil Co.'s No. 1 Brevard, 160 ft. N and W in Subdiv. 21, D. Diaz Sur.
Drlg. 2,320 ft.
Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,475 ft. from W line of survey, Willett Holmes Sur. No. 100.
To sidetrack csg. 1,410 ft.
R. Wells' No. 1 James, 396 from N and 330 ft. from E of James tract in Sec. 16, D Diaz Sur.
S.D. 150 ft.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page, 1,390 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur.
Drlg. 5,856 ft.
Humble Oil & Ref. Co.'s No. 1 Ike Honig, 2,640 ft. from N line and 2,640 ft. from E line of Sec. 38, Blk. M, G.H.&S.A. Sur.
S.D. 5,434 ft.
W. C. Proctor et al's No. 1 Judkins & Spencer, 1,320 ft. from S and W of W. W. Russell grant.
Location.

SCURRY COUNTY

Coffield & Guthrie's No. 1 Holliday, 2,310 ft. from N and 330 ft. from W. Sec. 130. Blk. 97, H.&T.C. Sur.
Drlg. 150 ft.

STERLING COUNTY

John I. Moore's No. 1 McIntire, 660 ft. from S and E. Sec. 35, Blk. 23, H.&T.C. Sur.
Drlg. 2,425 ft.

STONEWALL COUNTY

Merry Bros. and Perrini et al's No. 1 Williams, C SW of SW, Sec. 6, Blk. C, A B &M. Sur.
Drlg. 2,453 ft.

SUTTON COUNTY

Texas & Hesselman's No. 1 Mower, 1,980 ft. from S and W of Sec. 38, Blk. 5, T.W.& N.G. Sur.
Rigged up standard tools.

TAYLOR COUNTY

Dunnigan Bros. et al's No. 2 Hunter, 350 ft. from S and 350 ft. from W of Subdiv. No. 14, Willis Sur.
Drlg. 2,062 ft.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
S.D. 5,635 ft.; C.O.

UPTON COUNTY

Gulf Prod. Co.'s No. 12 Crier-McElroy, 1,320 ft. from N and E Sec. 198, Blk. F, Rig.
Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft from S and 660 ft. from W, Sec. 197, Blk F, C.C.S.D.&R.G.N.G. Sur.
Good show high gravity oil at 10,795-10,840 ft.; drlg. 10,912 ft.
Perry & Breeding's No. 1 Lane, 1,650 ft from S line and 990 ft. from E line of Sec 36, Blk. 1, M.K.&T. Sur.
Drlg. 2,345 ft.
Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.
S.D. 2,040 ft.

WARD COUNTY

Atlantic Oil Prod. Co.'s No. 1 Miller, 463 ft. from NW and 504 ft. from NE Sec. 3, J. C. Russell Sur.
Drlg. 1,110 ft.
Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27 Blk. 34, H.&T.C. Sur.
S.D. 1,700 ft.
Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 551 ft. from NE line Sec. 11, H.&T.C. Sur.
Fishing 500 ft.
Cook Drlg. Co.'s No. 1 Wood, 330 ft. from NW and SW, Sec. 5, W. F. Stewart Sur.
Cleaning out 2,548 ft. after shot.
Plains Prod. Co.'s No. 1 J. J. McGregor, 660 ft. from SE line, 660 ft. from SW line Sec. 169, Blk. 34, H.&T.C. Sur.
Drlg. 3,375 ft.
Postelio & Caprito's No. 1 Purcell, 330 ft from NE and 990 ft. from NW, Sec. 17 Blk. 34, H.&T.C. Sur.
Rig up and S.D.
Sageland Oil Corp.'s No. 2 Pure-Bennett 1,650 ft. from NW and 2,310 ft. from SW Sec. 16, Blk. 34, H.&T.C. Sur.
Spudded and S.D.
Tex-Mex Pet. Corp.'s No. 1 Pure-Bray, 1,980 ft. from NE and 660 ft. from NW, Sec. 6, Blk. 5, H.&T.C. Sur.
Machine.
West Texas O. & R. Co.'s No. 1-C University, 330 ft. from N and E, Sec. 6, Blk. 16. Location.

WINKLER COUNTY

Harry Adams' No. 2 Scarborough, 990 ft from N line and 990 ft. from W line, Sec 2, Blk. 77, P.S.L. Sur
Location.
Jeffries et al's No. 1 Brown & Altman 2,310 ft. from S and W, Sec. 6, Blk. B-6 10-in. csg. at 1,137 ft.
J. C. Maxwell's No. 1 Clapp, 1,980 ft. from N and 330 ft. from W, Sec. 37, Blk. 26, P.S.L. Sur
Set csg. 970 ft.
Magnolia Pet. Co.'s No. 4 Walton, 330 ft. from S and W, Sec. 1, Blk. 26.
Rotary rigged up.
R. S. Mathews et al's No. 1 Evans, 1,320 ft from N line and 1,320 ft. from W line Sec. 46, Blk. 73, P.S.L. Sur.
S.D. 110 ft.
Mid-Continent Pet. Corp.'s No. 1 Howe, 2,310 ft. from N and 330 ft. from W, Sec. 12. Blk. 26, P.S.L. Sur.
Location.
Sid Richardson's No. 1 Hill, 1,980 ft. from E line, 660 ft. from S line, Sec. 18, Blk O-11, P.S.L. Sur
T.D. 3,260 ft.; bailing oil and sulphur water.
Sayre Oil Co.'s No. 1 Leck, 330 ft. from S and E, Sec. 2, Blk. 26, P.S.L. Sur.
Material.
Sinclair Prairie Oil Co.'s No. 1 Cummings, 2,310 ft. from N and 330 ft. from E, Sec. 11, Blk. 26, P.S.L. Sur.
Rotary rigged up.

Texas Panhandle Wildcats

Week Ending November 5

CARSON COUNTY

McGill's No. 1 Cooper, 330 ft. from S and W of N½ NE Sec. 4, Blk. 9, L&G.N. Sur
Drlg. 1,015 ft.

CHILDRESS COUNTY

Humble Oil & Ref. Co.'s No. 1 B. P. Smith 1,327 ft. from S line and 1,327 ft. from E line of Sec. 27, H.&G.N. Sur., Blk. 9
Fishing 5,217 ft.

COLLINGSWORTH COUNTY

Andrews & Kerr's No. 1 Gideon-Bell, C NW NE Sec. 5, Blk. 13, H.&G.N. Sur.
Rigging up.

DALLAM COUNTY

Eben Warner's No. 1 Jarbie, 1,520 ft. from S line, 415 ft. from W line, Sec. 2, B.&B Sur.
S.D. 3,200 ft.; may abandon.

GRAY COUNTY

Dixon Creek Oil Co.'s No. 1 Benedict, 330 ft from S and 330 ft. from W, Sec. 114, Blk 3, L&G.N. Sur.
T.D. 3,270 ft.; putting on pump.
Irish-American Oil Co.'s No. 1-B Morse, 990 ft. S and 330 ft. E, W½ NE Sec. 54, Blk. 25, H.&G.N. Sur.
Rig.
Southwest Prod. Co.'s No. 1 T. Cobb, 1,320 ft. from S line, 990 ft. from E line, NE Sec. 134, Blk. 3, L&G.N. Sur.
T.D. 2,370 ft.; to deepen.
Texas Co.'s No. 1-C Taylor, 1,325 ft. from N and 1,320 ft. from W, Sec. 52, Blk. B-2 H.&G.N. Sur.
Drlg. 2,585 ft.

HUTCHINSON COUNTY

Brownie Oil Co.'s No. 1 Ware, 330 ft. from N and 330 ft. from W, Sec. 124, Blk. 4 L&G.N. Sur.
T.D. 3,075 ft.; T.P. 3,040 ft.; swbd. 90 bbls. oil in 8 hrs. after shot.
Huey et al's No. 1 Christian, 330 ft. from S and 330 ft. from W, Sec. 33, Blk. Y A.&B. Sur.
Drlg. 2,850 ft.; 4,000,000 ft. of gas.

MOORE COUNTY

Alma Oil Co.'s No. 1 Jones, 330 ft. N and W, Sec. 171, Blk. 3-T, T.&N.O. Sur.
Rig.
Phillips Pet. Co.'s No. 2 J. C. Wilson, Sec. 157, Blk. T-3, T.&N.O. Sur.
Drlg. 7,203 ft.
Sunray Oil Co.'s No. 2-A Jones, 330 ft. S and W lines Sec. 164, Blk. 3-T, T.&N.O Sur.
T.D. 3,349 ft.; 82,500,000 ft. of gas.
Texoma Nat. Gas Co.'s No. 3-P, Sneed, 3,734 ft. N and E of M. George Sur.
Rig.

RANDALL COUNTY

English et al's No. 1 Oxnard.
Fishing 5,375 ft.

WHEELER COUNTY

Bell O. & G. Co.'s No. 1 Plummer, 330 ft S and E of NW Sec. 45, Blk. 24, H.&G.N Drlg. 2,166 ft.
Bowers & Carvers' No. 1 L. B. Sims, 330 ft from N line, 330 ft. from E line of SW Sec. 60, Blk. 17, H.&G.N. Sur.
S.D. 2,166 ft.
Carver Drilling Co.'s No. 1 Rock Island 1,600 ft. from S line, 2,310 ft. from W line Sec. 47, Blk. 13, H.&T.C. Sur.
Drlg. 110 ft.
Christie-Hickman's No. 1 Walker, 330 ft. S and E of NE Sec. 49, Blk. 24, H.&G.N. Sur
Set csg. 2,275 ft.
Dyke Oil Co.'s No. 1 G. W. Sitter, 330 ft from N line, 330 ft. from E line, N½ NW Sec. 28, Blk. 24, H.&G.N. Sur.
S.D. 1,230 ft.
Ben G. Barnett's No. 1 Boren, NW cor. NE Sec. 24, Blk. 13, H.&G.N. Sur., 11 miles E and S of Shamrock.
S.D. 1,210 ft.
Johnson et al's No. 1 Grogan, 438 ft. N and 150 ft. W, Sec. 57, Blk. 23, H.&G.N. Sur.
Spudded and S.D.
LeFors Pet. Corp.'s No. 1 Perkins, 330 ft. from S line, 330 ft. from W line, Sec. 54, Blk. 24, H.&G.N. Sur.
Rig up.
Mudge Oil Co.'s No. 1 Dougherty, C SW Sec. 98, Blk. 23, H.&G.N. Sur.
Drlg. 635 ft.
Reno Oil Co.'s No. 1 Mankins, SW SE SE Sec. 54, Blk. 13, H.&G.N. Sur.
T.D. 2,216 ft.; shut in for P.L. connections.
Smith Bros.' No. 1 Williams, 330 ft. N and E, W½ SE Sec. 49, Blk. 24, H.&G.N. Sur
Drlg. 1,320 ft.
Underwood et al's No. 1 Roach, 330 ft. N and E, Sec. 27, Blk. 24, H.&G.N. Sur.
Cellar.

East Central Texas Wildcats

(Continued from Page 45)

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malahoff and S of Railroad, George Aldrick Sur.
S.D. 3,124 ft.

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70a-c. tract, 1 mile SE of Miller Grov, A. Caro Sur.
Drlg. 1,475 ft.
Hill & Hill's No. 1 Jones, 2,188 ft. E and 1,746 ft. S of Jasper Williams Sur, 8 mi. SE of Picton.
Austin chalk 3,963-4,070 ft.; drlg. 4,175 ft.; elev. 485 ft.

HUNT COUNTY

Cauble & Thompson's No. 1 Reed, 330 ft. N of northerly NE cor. of C. B. Payne Sur., but in F. Thweatt Sur., 3 miles SE of Greenville.
Location.
G. S. & S. Co.'s No. 1 O. Popper.
S.D. 2,885 ft.
J. C. Hall's No. 1 Parrish, C of 100-ac. tract N. Delaney Sur., 5 miles N of Lone Oak.
Moving in derrick.
L. G. Priest's No. 1 Amelia Barnett, 1,075 ft. from W line, 330 ft. from S line of J. C. Hamer Sur.
S.D. 2,420 ft.; elev. 607 ft.
Winnans' No. 1 J. R. Phillips, 320 ft. from S line and 960 ft. from W line of tract and survey, W. J. James Sur.
S.D. 40 ft.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 430 ft. from S line and 600 ft. from E line of Sur., 6½ miles NW of Elmo.
S.D. 478 ft.

LEON COUNTY

Normangee Corp.'s No. 1 B. H. Henry, 1,850 ft. from E line and 2,700 ft. from N line of survey, Robert Rogers League, 3½ miles NE of Normangee.
S.D. 2,740 ft.

LIMESTONE COUNTY

Doughtry et al's No. 1 S. Welch, 150 ft. from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
Rigged up.
Schultz' No. 1 Roy Ward, NE cor. of 73.3-ac. tract, 5 miles W of Mexia Field, Harrison York Sur.
Derrick.
V. V. Waite's No. 1 Barrow, 660 ft. from S and 950 ft. from E line of 320-ac. tract, W. G. McKenzie Sur., 3½ miles NW of Thornton.
Pits.

MORRIS COUNTY

McGinnis et al's No. 1 Staggers, 800 ft. from S line of survey and 150 ft. from W line of lease, J. B. Nelson Sur.
S.D. 4,255 ft.
Fleetborn Oil Corp.'s No. 1 Hammond, 3,500 ft. S and 1,750 ft. W of Thos. Burford Sur., 8 miles SE of Omaha.
Material.

NACOGDOCHES COUNTY

Murray Oil Co.'s No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Bailey Sur.
S.D. 3,815 ft.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE line of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
S.D. 1,186 ft.
R. B. Cocding et al's No. 1 Lela Kelt, 450 ft. from S line and center of N and S lines of lease, 3 miles NE of Chatfield. C. B. Emmons Sur.
S.D. 1,546 ft.
W. J. Keeling et al's No. 1 J. F. Rushing 484 ft. from N line and 150 ft. from W line of 134-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
T.D. 2,880 ft.
McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-acre tract, 1 mile W of Dawson, William Moss Sur.
S.D. 625 ft.
J. B. Stoddard, trustee's No. 1-A C. S. West, 150 ft. out SE Blk. No. 30, or 1,800 ft. from northerly N line and 3,750 ft. from westerly E line of survey, M. Boren Sur., 2 mi. S of Richland.
Drlg. 810 ft.
Syam Oil Co.'s No. 1 Mrs. Ray, 965 ft. E along N line from NW cor. Stevenson 101-acre tract and 305 ft. N at right angles, 3 miles SW of Rural Shade.
Top Woodbine 3,430 ft.; tested S.W. at 3,804 ft.

RAINS COUNTY

Wadley et al's No. 1 P. F. Jones, 400 ft. out of SW cor. of 22-ac. tract, 2½ miles S of Alba, B.B.B.&C. Sur.
S.D. 4,632 ft.; (corrected).
Rio Oil Co.'s No. 1 Johnson, 330 ft. N and W of 39 ac. tract, R. Hitchkiss Sur., 4½ miles E of Emory.
Top Woodbine 4,345 ft.; S.W. on test at 4,323-53 ft.

RED RIVER COUNTY

Abercrombie & Harrison's No. 1 Emma Watson, 4,850 ft. from W line and 4,550 ft from N line of survey, E. H. Tarrant Sur
Rigged up.
Bryant and Speer's No. 1 Jones, 300 ft. W and 150 ft. N of 67-ac. tract, J. Compton, 8 miles SE of Emory.
Location.

RUSK COUNTY

Fair, et al's No. 1 J. W. Needham, 335 ft. from W line and 700 ft. from N line of tract and survey, 10 mi. S of Henderson, on 135-ac. tract, J. W. Chambers Sur.
S.D. 2,590 ft.
Headwater Oil Co.'s No. 1 F. L. Gary, 375 ft. N of S line and center of E and W lines of 200-ac. tract, 3 miles E and S of Henderson, Jose A. Mora Sur.
S.D. 3,197 ft.
George Hudson et al's No. 3 Jeff Phillips, 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaris Sur.
Bailed S.W. at 3,673 ft.
Ben Lamb's No. 1 H. Leath, 330 ft, out of NW cor. of 185-acre tract in L. J. Dooley Sur., 2½ miles E of Pirtle.
S.D. 2,000 ft.

SMITH COUNTY

Deck et al's No. 1 Dendall, 330 ft. from S and W of 55-ac. tract, J. Williams Sur., 3 miles E of Van Field.
Spudded and S.D.
Fair et al's No. 1 Rushing, 1,000 ft. SE of old hole, 1¼ miles SE of Whitehouse.
Top Woodbine 4,296 ft.; S.D. 4,673 ft.
Nenny et al's No. 1 J. I. Coulter, 1,217 ft. E of W line and 865 ft. N of S line of 100-ac. tract, Maria Gestrada Sur., 2 mi. NW of Sand Flat.
Material.
Paul S. Williams et al's No. 1 Dean, 330 ft. E and 730 ft. N of 100-acre tract in Denson Moore Sur., 1 miles NE of Bullard.
Spudded and S.D.

VAN ZANDT COUNTY

Pet. P. L. & Storage Co.'s No. 4 Mrs. S. McGee, 450 ft. S of N line and 155 ft. E of W line of 53.4-ac. tract, Blk. 20, Elevation 441 ft.
Drlg. 350 ft.
Pete Corley et al's No. 1 Slaton, 160 ft. from W and 660 ft. from N lines of William Carlton Sur., 3 miles SE of Ben Wheeler.
Rig.
Gillum and Allen et al's No. 1 A. T. Bass, 150 ft. from W line and 150 ft. from N line of 10-ac. tract, William Hart Sur.
S.D. 1,700 ft.
Green and Winn's No. 1 Eaton, 330 ft. out of most westerly SW cor. of J. Wilson Sur., 2 miles SE of Martin.
Location.
Rogers & Schwartz's No. 1 McKinney, C of N and S lines and 150 ft. from W of 100-ac. tract, Wm. Daniels Sur.
S.D. 1,257 ft.
Martin & Evans' No. 1 Bryant, 482 ft. N of same operators' dry hole, Nacogdoches County School Land Sur.
Rigged up.
Miller et al's No. 1 J. M. Palmer, 150 ft. from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
S.D. 700 ft.
Peden and Olson's No. 1 J. M. Palmer, 300 S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
T.D. 2,188 ft.; 5 bbls. oil and 10 bbls. of wtr.
M. Rouch et al's No. 1 Bearden & Palmer, 150 ft. out of SE cor. of 61-ac. tract, Nacogdoches C.S.L.
S.D. 1,237 ft.

WOOD COUNTY

Alex Snyder et al's No. 1 T. Holmes, 300 ft. out of NE cor. of 132-ac. tract, 1½ miles SE of Hawkins, A. N. McKnight Sur. 399.
Coring 5,405 ft.

Acidizing Helps Increase Michigan's Production; Gladwin County Wildcat Making 25 to 75 Bbls.

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Nov. 5.—Nearly 5,000 bbls. of additional oil production was developed in Michigan last week, principally in the Porter Township, Midland County Pool. Several dry holes, one in a Porter extension area, one in Austin Township, Mecosta County; one in Home Township, Montcalm County, and one in Pinconning Township, Bay County, with a small oil producer in Vernon Township, Isabella County, completed the week's record.

No new developments were reported in M. F. Whitehill's No. 1 Omer Kintner, C S NW NW Section 11-17n-2w, the Beaverton Township, Gladwin County, wildcat which caused such a sensation the week before. Conflicting reports credited the possible discovery of a new Michigan Field with a daily flow of from 25 to 75 bbls.

Operators are preparing to clean out the hole, reset the casing, take a steel line measurement and retest for greater production. Virtually everything is leased within 5 miles of the well, principally by such large concerns as Sun Oil Co., Shell Petroleum Corp., East Ohio Gas & Oil and Pure, with M. F. Whitehill and his son holding a large block themselves.

It is recognized the main significance of the new test is the indication of another northwest-southeast trend paralleling the present big Porter, Chippewa, Jasper, Vernon and Leaton trend. Natural gas discoveries along the Gratiot, Montcalm, western Isabella and Mecosta County trend located to the southwest of the main oil trend, or the opposite direction from the new Gladwin County well, also seem to bear out this possibility.

Leasing operations have extended into Groat and Gladwin Townships, Gladwin County, in the latter of which another test once was started but has been shut down for many months. Success in the Beaverton well also has aroused new hopes for several Mills Township, Midland County, tests.

Isabella County

Mellon-Pollock Oil Co.'s No. 2 Icem C. Slentz, NW SW SW Section 23-16n-4w, Vernon Township, Isabella County, topped the Dundee at 3,717 feet and made a 50-bbl. initial producer at 3,758 feet.

Kenjos Oil Corp.'s No. 1 Calvin Chivington, SE SW NE Section 3-14n-3w, Chippewa Township, had 700 feet of oil in the hole at 3,540 feet and was drilling deeper.

Midland County

The largest new completion of the past week was the Pure Oil Co.'s No. 11 Mina Narmore, SW SE SW Section 15-13n-1w, Porter Township, Midland County, which flowed 240 bbls. during the first three hours after being drilled into the Dundee pay sands and was rated at 1,447 bbls. initial.

Fred Stork's No. 4 W. C. Breu, SW NE SE Section 20, same township, made about 30 bbls. naturally and was to be treated with acid. It topped the Dundee at 3,391 feet. Northern Oil & Gas Corp.'s No. 4 Hattie M. Hodge, SE NW SW Section 18, Porter Township, topped the Dundee at 3,415 feet, hit a show of oil and gas at 3,441 feet and also will be treated.

Pure Oil Co.'s Nos. 6 and 7 Neitzke, treated with acid, increased from 498 to 2,637 bbls. a day, accounting for an increase of 2,139 bbls. last week. Strange and Fortney's No. 8 J. W. Campbell, NW NE SW Section 18-13n-1w, Porter Township, estimated good for 2,400 bbls. initial when completed about two weeks ago finally was rated at 3,600 bbls. for another increase of 1,200 bbls.

McHugh Oil Corp.'s No. 1 Breckenridge State Bank, NW NW NW Section 29, near the south limits of the Porter Field, struck water and was a dry hole in the Dundee topped at 3,458 feet and drilled to 3,506½ feet by J. P. McHugh, trustee.

Ogemaw County

Two tests in Ogemaw County, one in West Branch Township and the other in Mills Township, were treating with acid for shows in the upper Traverse and Dundee limestones, respectively, last week.

Youman's-Dalton Oil & Gas Co.'s No. 1 Hustead, NW NW SE Section 36-22n-2e, West Branch Township, topped the Traverse at 1,660 feet and drilled 1 foot in before treating for a show which filled up 400 feet in the hole.

Melling Oil & Gas Co.'s No. 1 State of Michigan, SE SE NW Section 6-21n-3e, Mills Township, was treating for a Dundee show. W. C. Mee's No. 1 Gibbs, SW SE SW Section 30, also Mills Township, was drilling 40 feet in without a show.

Muskegon Development Co.'s No. 1 Frank Estey, NW NW SW Section 28, West Branch Township, was drilling into the Dundee.

Several other Ogemaw County tests were nearing the upper Traverse or Dundee as the week closed.

Montcalm-Mecosta

Two tests on the Montcalm-Mecosta County trend were dry and abandoned last week. Pure Oil Co.'s No. 1 Della Tenney, SE SW SE Section 3-12n-6w, Home Township, was finally plugged and abandoned after being plugged back from the Dundee at 3,596 feet to the upper Traverse at 3,117 feet and acid treated without success.

Colmur Oil & Gas Co.'s No. 1 State of Michigan, also was dry and abandoned after drilling through the Michigan stray sand without a show of gas and into the Red Rock at 1,575 feet. It was located C NW NE Section 24-14n-9w, Austin Township, Mecosta County.

Wildcat Tests

Ward J. Blunt's No. 1 John Koczara, NW NE NW Section 17-17n-4e, Pinconning Township, Bay County, has been plugged and abandoned as a duster.

Mellon-Pollock Oil Co. and The Wittmer Co.'s No. 1 Elwyn J. Johnson, SW SE NE Section 1, Richmond Township, Osceola County, was drilling below 3,500 feet and expected to test the Dundee soon.

Tope-Voorhees-Blunt's No. 1 Neff ranch, SW SE NW Section 22, Day Township, Montcalm County, was drilling ahead to test the Dundee after failure in the upper Traverse.

Nearing Completion

Two wildcat tests, one in Gratiot and the other in Oakland County, were nearing completion in the Sylvania formation. T. F. Caldwell, Inc.'s No. 1 Beecher Mackey, NW SW SE Section 21, Lyon Township, Oakland County, was expected to reach the Sylvania this week, while the Mid-States Oil Development Co.'s No. 1 W. L. Yost in Bethany Township, Gratiot County, was nearing the same formation at more than 4,260 feet deep.

Herbert Snell's No. 1 William F. Zeeb, NW SE Section 34, Genoa Township, Livingston County, shut down at 5,017 feet, is expected to hit the Trenton limestone at about 5,050 feet. It is one of the deeper drilling wells in the state.

Talbot Oil Co.'s No. 1 McPherson estate, NE NE NW Section 35, Howell Township, Livingston County, also is planning to drill to the Trenton.

Three tests in proved territory in Porter Township, Midland County, also were expected to be completed in the Dundee including George Hanners' No. 2 Free Methodish Church, in Section 17, Pure Oil Co.'s No. 6 Hill, Section 18, and C. W. Teater's No. 3 Wale, Section 22.

Five Tests Nearing Sands

Five tests were nearing Michigan stray gas sands, namely, Atha Oil Co.'s No. 1 Little, Section 31, Vernon Township, Isabella County; Chippewa Oil & Gas Co.'s No. 1 Cook, Section 2, Broomfield Township; Hall-Be-Oyle Syndicate's No. 1 Leiters, Section 33, Sherman Township; Taggart Brothers' No. 9 Oscar Schuberg, Section 4, Austin Township, Mecosta County, and Gordon Oil Co.'s No. 1 Brisboy, Section 8, Millbrook Township, also Mecosta County.

McClanahan Oil Co.'s No. 1 Boutell, Section 5, Ogemaw Township, Ogemaw County, also is expected to test the Dundee on a wildcat location.

New Locations

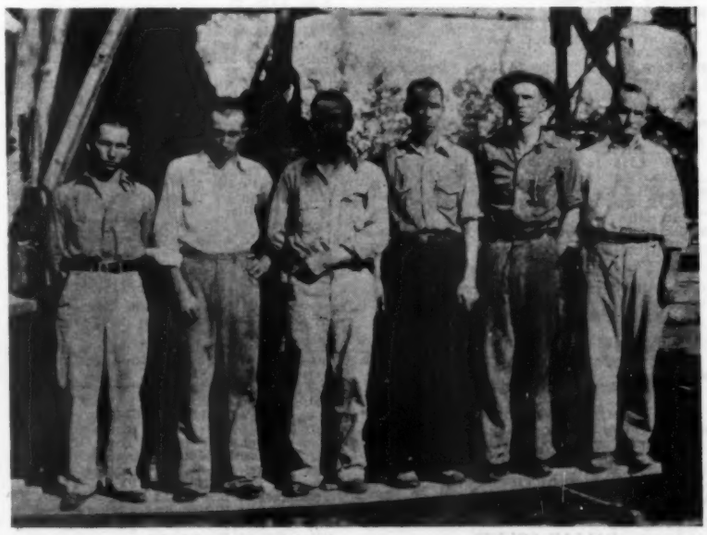
Rigs have been built on several new locations in Porter and Greendale Townships, Midland County. Gordon Oil Co. will drill the Columbia Oil & Gas Co.'s No. 1 Henry Northrup in Section 19, Porter Township. Garfield Oil & Gas Co.'s No. 1 Mabel Finch, SW SE Section 21, Porter, also has been spudded.

Robert W. Freye will drill No. 1 Hill in Section 9, Porter Township, for a group of Detroit interest holders.

Davidor & Davidor, of Pennsylvania, will drill No. 2 Emmett Scott in Section 8, Greendale Township.

Materials have been moved in for No. 5 William Maywood Carter in Section 18, of Porter, to be drilled by the Carter Lease, Inc. McClanahan Oil Co. is planning to drill two more tests on the Eliza Breu lease in Section 20, Porter Township.

Father and Five Sons Comprise Rotary Drilling Crew on Test in Arkansas



Left to right: Glenn, John, Jim, Clyde, Bob and E. O. Olds; the father and sons crew on Benedum-Trees' No. 1 Bodcaw, Lafayette County, Ark.

The story of the man who tried to organize a baseball team within the confines of his own family has been eclipsed by a veteran oil man, who has seven sons, ranging in age from 17 to 33 years, all associated with him in the oil business.

Edgar O. Olds, of Camden, Ark., claims the distinction of being probably the only oil man in the history of the business who is in charge of a rotary crew of five men, all his own sons, using them on the graveyard tour of the Benedum-Trees' No. 1 Bodcaw in Lafayette County, Arkansas.

"Just strikes me as kind of unusual to see my five boys all making up the midnight crew," said Mr. Olds. "Two of them are drillers and three are roughnecks, but I want to say that all of them can handle any position on the crew from derrick man to foreman." The two drillers are Bob and Clyde, but if one starts a well as driller, the other takes his place on the crew as roughneck, and the first boy completes the job.

Bob, who is 30, is the oldest of the five working on the well. The other sons on the crew are Clyde, Jim, John and Glenn.

SPECIFY....
McEvoy
IMPROVED
WIRELESS WELL STRAINER
and
PREFORMED WIRE STRAINER
J.H. McEVOY & CO.
TEXAS INC. MILBY
HOUSTON, TEXAS.

OUR SERVICE MAN
is always near your job in Southwest Louisiana, representing every type of tool you need.
LOUISIANA SUPPLY CO.
(Successor to Union Supply Corporation)
SULPHUR, LOUISIANA
"an independent supply company"

Rentral Service on HINDERLITER Fishing Tools and Casing Tools, all sizes.
Branches: Palestine Kilgore Freer, Texas and Eunice, N.M.
Branches: Lake Charles & Houma, La.
Other Stocks: Cleveland Louise Livingston Refugio
"Cutting and Fishing Tool Service"

MANHATTAN
PACKING
BELTING
HOSE
convenient for you in our complete stocks.
MURRAY-BROOKS HDWE. CO., LTD.
LAKE CHARLES, LA.
Oil Well Supplies
Branches at:
HOUMA - LEEVILLE - SCOTT

BREWSTER

Ring Type BRADEN HEAD
Perfected by BREWSTER. Simple, efficient, highly economical. Simply a solid cast ring with 2" outlet. Has guide and packing groove on under side where it sets down on top collar of surface casing. Has packing guide on top to receive collar of suspended casing. A big saving—a real improvement. Price and details on request.
The BREWSTER Co., Inc.
Phone 3181 Shreveport, La.
LONGVIEW - HOUSTON - LAKE CHARLES

Among Gulf Coast Drilling Contractors

Trinity Drillers, Inc., are engaged on an interesting job for the Continental Oil Co. at Seadrift, Calhoun County, whree the heaving shale problem is being combated along new lines. Surface casing was set in this well at 220 feet, being 18⅝-inch. At 1,472 feet, 13⅜-inch casing was set. At 5,878 feet, 9⅝-inch casing was set. Drilling the plug on the 9⅝-inch, the well was carried to 6,576 feet, where pipe was stuck by heaving shale. At this point a Kennedye mud cracking unit was installed to condition the mud, and pipe was worked loose. A 1,500-foot string of 7⅝-inch flush joint casing, equipped with a special T-I-W bit, was run into the hole on the bottom of the regular 4½-inch drill stem, and the hole was carried to 6,887 feet, where it is believed the 7⅝-inch casing twisted off, although this is not definitely known. Since the casing was made up on the drill stem on a T.I.W. safety joint, the 4½-inch drill stem was pulled, and run again with a mill on bottom. Special T.I.W. bit was milled up, and a regular 6¼-inch fishtail carried the hole to 7,119 feet, where the pipe is stuck. Job is shut down, waiting for orders. The record of this well, coupled with the record of the well being drilled for Continental by W. V. Bowles at Citrus Grove, Matagorda County, indicates that considerable progress is being made in combating heaving shale with a combination of mechanical means plus careful treatment of the mud to eliminate free water.

Rutherford Drilling Co. has contract to dig a well for the Conroe Oil Corp. and Santa Clara Oil Co. in the Refugio Field, to be carried as No. 1 Ella West. The company also has one rig running for the Phillips Petroleum Co. in the Vanderbilt Field.

At Eureka Heights, Houston's city limits wildcat, Alamo Drilling Co. is drilling below 7,100 feet on a well for C. B. Bunte, Inc., San Antonio, Tex. This test is scheduled to go to 7,350 feet.

San Patricio Drilling Co., which has been shut down for several days on a well for the McCarthy Oil Co., at Danbury, Brazoria County, is preparing to start again. It is reported that the well will be plugged back from 6,536 feet to a higher sand, where test for production will be made.

Jeff Hooper, who recently completed a gas well in the Coleto Creek Field, Victoria County, for himself and Rupert Cox, will plug this well back from 2,858 feet to 2,143 feet, where it will be perforated and recompleted as a gas well. The upper sand is expected to be a more prolific producer, and a commercial outlet for the gas has been arranged for. Mr. Hooper is also preparing to spud in on a 6,000-foot wildcat test in Austin County, near the town of Sealey, for Sid Wheless, independent operator of Houston.

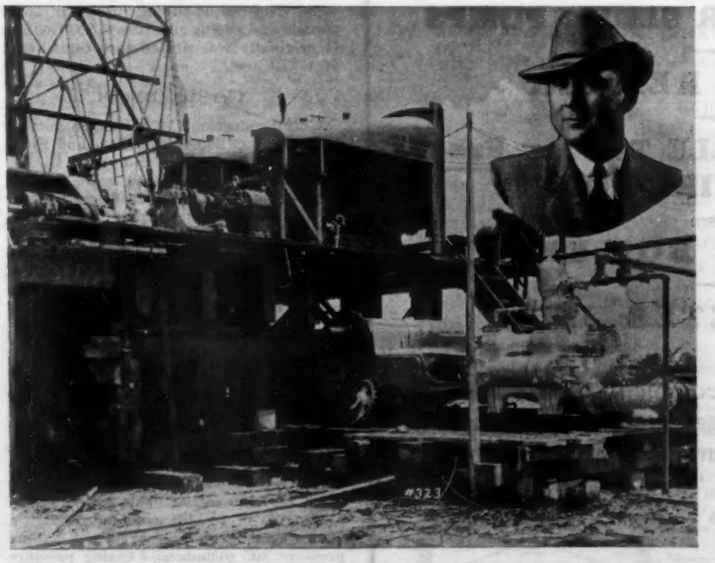
Smith & McDannald were running casing on five wells simultaneously at the week-end. Three are deep wells in the Bosco Field, Louisiana; one is a well for Tide Water-Texas Seaboard Oil Companies at Cayuga; and one a well for the Pure Oil Co. at Louise, in Wharton County.

L. W. Capps has set 1,214 feet of surface casing on his second well in the Brookshire (San Felipe Dome) area, where he recently brought in a 1,200-bbl. producer. The company also has two rigs running at Thompson, Fort Bend County, for Naylor Oil Co. A fourth rig is drilling for Sid Cloyes in the Government Wells Field, in Duval County.

Gholson Drilling Co. has finished No. 1 Clements as a producer in the Sam Fordyce Field, Hidalgo County, for C. L. Smith and itself. The company has also straightened hole and landed and cemented 1,000 feet of surface casing in its well in Bandera County, being drilled with cable tools.

Steen Drilling Co. is drilling at 6,145 feet on its wildcat near Port Lavaca, Calhoun County, on a block of acreage held by the company. The well has been carried 145 feet below contract depth to date. The company also has a rig run-

(Continued on Page 78)



View of the business end of George H. Echols' latest gasoline powered rotary drilling rig, now drilling a deep wildcat test for the Sun Oil Co. in Starr County. Insert picture is of Mr. Echols who, following a number of years practical experience in virtually all departments of the oil business, started contracting after the World War. His rigs have dug hundreds of thousands of feet of hole in the Gulf Coast and East Texas, and among his various records is the achievement of having finished, several months ago, the 100th well for one major company, and the 50th well for another major company

14 YEARS IN SERVICE
W-K-M Rotary Slips have been continually improved. Drop-forged, heat-treated independent segments assembled so each has free movement.
W-K-M Co., Inc.
Houston, Texas
Export Office:
74 Trinity, Place
New York

Ask the
NORVELL-WILDER MAN
about
LUNKENHEIMER
VALVES
Norvell-Wilder
Supply Company

VALUABLE INFORMATION
is to be found in The Oil and Gas Journal each week pertaining to all phases of the Petroleum Industry.
Keep abreast of the times by reading it each week.
The OIL and GAS JOURNAL
Tulsa, Okla.

MISSION SLIPS
Positively do not mar pipe

Parts easily replaced on derrick floor
•
Also specify Mission Slips and Pistons
•
MISSION MANUFACTURING CO.
HOUSTON • TEXAS

Galveston County Prospect Still Uncompleted; Brazoria and Liberty County Tests Watched

By F. L. SINGLETON
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Nov. 5.—With Humble Oil & Refining Co.'s No. 1-B Maco Stewart, the expected discovery well, still uncompleted, the Dickinson prospect, Galveston County, over the week end had not been added to the commercially productive fields of the Gulf Coast. The Humble company's wildcat, which is testing sand at 8,003-24 feet, failed to flow after washing several hours and at latest report was swabbing. It has been showing considerable oil and gas, however, and general opinion is it will make some kind of a producer.

This wildcat, one of two which have been drilling simultaneously in the immediate area, originally was drilled to a total depth of 8,070 feet, where it showed salt water. It is plugged back to 8,024 feet where 17 feet of 7-inch screen was set on a string of blank liner, sealed with packer at the top to the 9⅝-inch casing at 7,597 feet. The upper portion of the producing horizon, which carried largely gas, was blanked off by the liner.

While it has not been commercially productive, Dickinson, or San Leon as it sometimes is called, has been looked upon as proven area ever since Humble Oil & Refining Co.'s No. 1 Maco Stewart, the first test drilled, blew out last August at a total depth of 7,887 feet. That well, showing considerable pressure, caught fire and ran wild for several hours before sanding up. It was abandoned although later operators may attempt to go back in the hole.

The present well is approximately a half mile west and a little north of the blowout test and indications are it may be a west edge well. The other wildcat drilling in the immediate area is Pure Oil Co.'s No. 1 Shelor, approximately a half mile due north of the blowout in the B.B.B.&C. Survey. It has been drilled to 7,837 feet but because of a crooked hole has been plugged back to 7,300 feet, from where a new hole will be drilled. This well has a string of 9⅝-inch casing at 6,987 feet. Casing was run in both the Humble and Pure wells before reaching the pay horizon as a precaution against the high gas pressures known to exist.

Deep Brazoria Wildcat

A number of other areas figured prominently in important developments on the Gulf Coast during the week. Chief among these were the Old Ocean geophysical prospect in Brazoria County, where a deep wildcat is waiting on cement to set to test an oil showing sand in the Frio; the Hardin district of central Liberty County, where another wildcat is in a Cockfield sand with showings, and the Pledger district of northwestern Brazoria County, where a substantial extension was made to the producing area.

In the Old Ocean district, western part of Brazoria County, Harrison and Abercrombie's No. 1 Bernard River Land, a wildcat in the Charles Breen Survey, made its appearance as a prospective pool opener when it cored the Frio sand containing a strong petroleum odor from 8,634-51 feet, the total depth. Seven-inch casing has been cemented at 8,606 feet and it is due to be tested the latter part of the week. It is on a large block of acreage, and was drilled on the strength of geophysical research done a few months ago.

Liberty County

Eleven miles north of Liberty, Liberty County, in what is known as the Hardin district, Turnbull and Irwin and others' No. 1 Lynott and Buffum, James Robeson Survey, a wildcat, which has caused one of the most active leasing and royalty campaigns that the coastal district has witnessed in several months, encountered the Cockfield formation (expected pay horizon) at approximately 7,044 feet, which was reported to have carried a good gas showing at around that depth. Late in the week it was coring in shale below 7,096 feet. With the test generally conceded as being several hundred feet high on every formation, leases and royalty are selling as high as $200 per acre.

Pledger Field

The producing limit of the Pledger Field, Brazoria County, was extended 1½ miles southeast when Humble Oil & Refining Co.'s No. 1 Bob McFarland, D. McNeil Survey, was completed for an initial production of 13,000,000 feet of wet gas per day with tubing pressure 2,160 pounds and casing pressure 700 pounds closed in. It is producing from a plugged back depth of 6,800 feet, after it had encountered salt water at 6,866 feet. Danciger Oil & Refining Co.'s No. 4-A Hunt, in the William C. Carson Survey, at Pledger, also was completed as a wet gasser at a plugged depth of 6,850 feet with tubing pressure 2,700 pounds and casing pressure 2,500 pounds. It originally was drilled to a total depth of 6,879 feet.

Cleveland District

Gulf Production Co. has made another extension location in the Cleveland Field, Liberty County. It is No. 1 R. D. McDonald, 2,796 feet north and 185 feet west of most southern southeast corner of the Tom Devers Survey, Abstract No. 170. It is a west offset to the company's No. 6-C Kirby Lumber Co., completed last week for an initial production of 350 bbls., and which extended the field westward.

Austin County

The Raccoon Bend Field, Austin County, registered two additional Cockfield producers during the week when Humble Oil & Refining Co. completed its No. 2 Remmert and No. 10-A Walton. No. 2 Remmert, William C. White Survey, topped sand and shale showing oil at 4,044 feet and was completed at a total depth of 4,140 feet in shale for an initial production of 40 bbls. an hour through a one-half inch tubing choke, with tubing pressure 305 pounds and casing pressure 410 pounds. Seven-inch casing was cemented at 4,044 feet. No. 10-A Walton, same survey, topped sand showing oil at 4,010 feet, and was completed at a total depth of 4,123 feet in shale for an initial production of 65 bbls. an hour through one-half inch tubing choke with casing pressure 550 pounds and tubing pressure 440 pounds. Seven-inch casing was cemented at 4,007 feet. The same company made location for No. 10 Arthur Marten and has started operations. It is in the William C. White Survey, 315 feet from southeast line and 313 feet from the southwest line of lease.

Manvel Field

Three good producers were added to the Manvel Field, Brazoria County. Harrison and Abercrombie's No. 2 Lewellen in the A.C.H.&B. Survey No. 91 topped the oil sand at 4,020 feet and was completed at a total depth of 4,034 feet in sand for an initial production of 500 bbls. in 24 hours through a one-half inch tubing choke with tubing pressure 900 pounds. Texas Co.'s No. 2 Cascio, Charles McO'Donnell Survey No. 74, which had been plugged back from 5,191 feet to 4,923 feet and sidetracked and drilled to 5,160 feet, was completed for an initial production of 22 bbls. an hour through a one-quarter inch tubing choke, with tubing pressure 610 pounds and casing pressure 590 pounds. Seven-inch casing is at 5,138 feet. Same company's No. 7 Houston Oil Field Association, A.C.H. &B. Survey No. 91, encountered sand showing oil from 3,979-92 feet and was completed for 25 bbls. an hour through one-quarter inch tubing choke, with tubing pressure 440 pounds. Seven-inch casing was cemented at 3,978 feet.

Waller County

In the San Felipe Dome, Waller County, Seaport Oil Co.'s No. 1 Vaughn, John McFarland Survey, which opened the first commercial production on this dome several weeks ago after being deepened to 2,978 feet, has been averaging 130 bbls. of fluid daily, of which 50 per cent is fresh water, mud and sand, and 50 per cent 23-degree gravity oil through a three-eighths inch choke on drill stem, with casing pressure 125 pounds. Two other recent locations are drilling. DeArmand Brothers' No. 1 Smith, 102 feet each way out of a 30-acre tract, cemented 10¾-inch casing at 515 feet and is drilling below 2,010 feet in shale. It is in the John McFarland Survey, north of the discovery well. Seaport Oil Co. has started its second well on the J. W. Avery lease, about 1,500 feet south of the discovery in the John McFarland Survey. It is drilling in sand and boulders below 280 feet.

Louise Field

The Louise Field, Wharton County, got two new locations when Pure Oil Co. made location for No. 1 G. F. Wharton Estate and No. 1 John Macha. No. 1 Macha is 318 feet from the northwest line or from the southeast line of the F. Walnut Survey and 467 feet from the northeast line of 101.53-acre lease in the M.&C. Survey No. 25. No. 1 G. F. Wharton Estate is 1,497 feet from the southwest line and 318 feet from the southeast line of the F. Walnut Survey No. A-355.

In the Louise-Midfield area, Wharton County, Whitehead & Rash are starting a wildcat on the C. T. and D. Kountze lease, 1,320 feet from the north line and 330 feet from the east line of the S.A. &M.G. Survey, Abstract No. 328, Section 1.

Harris County

One interesting wildcat in Harris County was being marked off the list after it had encountered salt water in the Cockfield sand. It is American Liberty Oil Co.'s No. 1 J. J. Sweeney in Block 4, Section 17, W.C.R.R. Survey,

Exclusive Gulf Coast distributors for:

WILSON-SNYDER SLUSH PUMPS

SIEVERS REAMER

AMERICAN CABLE Tru-lay Pre-formed WIRE ROPE

KEWANEE BOILERS

DRIFTMETER JR.

In addition we carry complete stocks of all supplies for oil and gas wells. Our nine Gulf Coast stores assure prompt service to all Gulf Coast fields. "Order it from Wilson" is a good habit to acquire.

WILSON SUPPLY CO.

1412 Maury St., Houston, Texas

OIL and GAS WELL SUPPLIES

BRANCHES: Barbers Hill, Kilgore, Gretа, Gladewater and Tomball, Texas; Lake Charles, Shreveport, and Scott, Louisiana.

which tested 8 thribbles of mud with good petroleum and gas odor and 23 thribbles of salt water on a 24-minute drill stem test made from 6,536-44 feet. It topped the Cockfield at approximately 6,347 feet and is coring below 6,564 feet in shale. C. B. Bunte, Inc.'s No. 1 Laura Lackner, a wildcat near the northwest city limits of Houston in the Henry Reinerman Survey, is coring in shale below 7,108 feet. In the same county, and northeast of Houston, McElreath & Suggett have assembled a block of approximately 9,000 acres centering around the Reels and Trobough Survey, just south of the County Poor Farm. It is reported the block was taken for Stanolind Oil & Gas Co.

Roanoke Field

The Roanoke Field, Jefferson Davis Parish, Louisiana, received its second producer when Humble Oil & Refining Co. completed its No. 1-B Devilbiss, one-half mile southwest of the discovery well, for an initial production of 29 bbls. per hour through a three-eighths inch tubing choke, at a total depth of 7,918 feet. At this depth the producer varies in depth considerably from Shell Petroleum Corp.'s No. 1 Kratzer, the discovery well, which is producing from 18 feet of sand from 8,664-82 feet whereas the Humble test is producing from sand found at 7,772-84 feet and 30 feet of sand from 7,888-7,918 feet. In the immediate area of the producer the company has made location for another test, No. 1 Taylor, 440 feet east and 440 feet south of the NW cor. SW Section 12. In the same field, Shell Petroleum Corp.'s No. 1 Jarnigan, an east offset to the discovery, is coring in shale below 8,898 feet. It tested considerable salt water at 8,764 feet.

Kittrell Field

In the Kittrell Field, southern Houston County, two new tests were added to the field, when Alpha Petroleum Co. and Boone Brothers made locations for two tests in the same survey, about 2 miles east and slightly south of the discovery well. Alpha Petroleum Co.'s No. 1 Mrs. Cassie L. Stokes is in the center of the west 10 acres of the Stokes 30-acre tract out of the W. B. Smith Survey. Boone Brothers' No. 1 Texas Long Leaf Lumber Co. is in the north corner of the east 20 acres of the company's 73-acre tract. Both tests are north and east of Lion Oil & Refining Co. and East Texas Refining Co.'s dry holes in the J. Callahan and Mrs. F. Willis Surveys. Three miles south of the discovery in the George Keilman Survey, Walker County, Boone Brothers' No. 1-A Texas Long Leaf Lumber Co. appears to be another dry hole. It is drilling below 2,195 feet in water sand and will probably be abandoned. Miller and Lacy's No. 1 Hanner, abandoned several weeks ago at 1,852 feet, has been carried deeper to 2,401 feet, where it is shut down. It is in the William Dillard Survey about 3 miles west of the discovery. Humble Oil & Refining Co.'s No. 2 Shaw, northeast of the discovery, drilled to 1,390 feet where it was found to be 5 degrees off vertical. Operators have plugged back to 1,137 feet and are now waiting on cement to set. The company's No. 1 Texas Long Leaf Lumber Co., one-half mile north of the discovery, is coring in shale below 3,301 feet. Joe Burnham of Fort Worth is moving in material for a 2,200-foot test in the LaRue Survey, about 8 miles northeast of the Kittrell Field and 1 mile due north of the town of Lovelady. Over the line in Madison County, Sunray Oil Co. and others are moving in material for their No. 1 Ferguson, a wildcat in the extreme eastern part of the county, due east of the town of Madisonville on a block of approximately 5,700 acres.

Bosco Field

In the Bosco Field, Acadia and St. Landry Parishes, Superior Oil Producing Co. completed its No. 1 L. Johnson for an initial production of 417 bbls. through a five-sixteenths inch choke on the casing and a nineteen-sixty-fourths inch choke on the tubing, with casing pressure 2,400 pounds and tubing pressure 2,700 pounds. Seven-inch casing was cemented at 8,627 feet. Total depth is 8,650 feet. Three other tests have reached the pay and are due to be completed later in the week. Seven-inch casing was cemented at 8,642 feet in the company's No. 2 Iseringhauser. Its No. 2 Larcade is bottomed at 8,066 feet with 9⅝-inch casing cemented at 8,041 feet. No. 3 Larcade is waiting on cement to set after the operators had cemented 9⅝-inch casing at 7,830 feet. Total depth is 7,846 feet.

In the Iowa Field, Magnolia Petroleum Co. completed No. 3 Willet for an initial production of 1,530 bbls. per day. It is bottomed at 6,970 feet, with 7-inch casing cemented. Location is in Section 7-9s-6w.

Pure Oil Co.'s No. 6 Alliance Trust Co., in the Gueydan Field, Vermillion Parish, on the northwest edge of the dome in Section 33-11s-1w, is fishing at 9,379 feet.

Humble Oil & Refining Co. has made location for its fifth wildcat in southern Louisiana on the American Rive Co. lands in Section 27-10s-1e, about 5 miles south of the town of Crowley and about 8 miles northeast of the Gueydan Field in Vermillion Parish. The company's other wildcat operations are in Allen, Ascension, Beauregard, Calcasieu and Evangeline Parishes.

Wildcat Operations on Gulf Coast

Week Ending November 3

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 1 Mueller. Rig up.

Humble O. & R. Co.'s No. 1 Hill, Wm. C. White Sur. Location.

Humble O. & R. Co.'s No. 2 Remert. Comp. 4,120 ft.; I.P. 46 bbls. per hr.; ½-in. choke.

Humble O. & R. Co.'s No. 6 Alberta Niemar, 525 ft. at R/A from NW line, 337 ft. at R/A from SW line, Wm. Harvey Sur. Drlg. sand 4,268 ft.

Humble O. & R. Co.'s No. 10 J. C. Walton, 536 ft. at R/A from NE line, 375 ft. at R/A from SE line and 225 ft. NW of No. 4 Wm. C. White Sur. Comp.; T.D. 4,123 ft.; I.P. 5 bbls. per hr.; ½-in. choke.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 7 Blakely-Winston, 43 deg. 11 min. E, 5,540 ft. N, 26 deg. 49 min. W, 300 ft. from SW cor. of Blakely-Winston 560-acre tract, H.T.&B. Sur. Drlg. sandy shale 575 ft.

Shell Pet. Corp.'s No. 3 Haury, 800 ft. SE of No. 1 in line with No. 2 and No. 1 Blakely-Winston, H.&T.B. Sur. No. 12 Recovered 750 ft. of mud and 250 ft. of S.W. on D.S. test; T.D. 6,480 ft.

DAMON MOUND—BRAZORIA COUNTY

Gulf Stream, Inc.'s No. 1 Cave Heirs, 160 ft. from N line and 60 ft. from E line of Lot C, Blk. 50, A. Darst Sur. Location.

Esco's No. 1-D Wisdom, 25 ft. from S and W lines of Blk. D, Lot 5, A. Darst Sur. Drlg. shale 2,000 ft.

Intercoastal Oil Co.'s No. 12 Wisdom, 90 ft. from N line and 35 ft. from W line of Lot A, Blk. 51, A. Darst Sur. Drlg. 2,355 ft.

MANVEL—BRAZORIA COUNTY

Texas Co.'s No. 13-B Belcher, W of No. 10-B Belcher, H. N. Little Sur. Rig up.

Texas Co.'s No. 9-A Belcher, 1,650 ft. S, 42 deg. W, and 330 ft. N, 48 deg. W of E cor. of lease, H. N. Little Sur. Drlg. shale and lime 4,462 ft.

Texas Co.'s No. 2-A Casolo, 200 ft. N and 200 ft. W of SE cor. of lease, Chas. O'Donnell Sur. Comp.; 7-in. csg., 5,160 ft.; I.P. 22 bbls. per hr.; tubing pressure 610 lbs.; csg. pressure 590 lbs.

Texas Co.'s No. 1 Thomas James, 247.5 ft. N and 330 ft. E of SW cor. of Lot 1, A. C.H.&B. Sur. 91, Abst. 402. Drlg. shale and shells 3,452 ft.

Texas Co.'s No. 11 Houston Oil Field Association, 441.3 ft. W and 247 ft. N of SE cor. of Lot 9, A.C.H.&B. Sur., 91, Abst. 402. Drlg. shale and lime 3,020 ft.

Gulf Prod. Co.'s No. 4 Colby, 330 ft. out of most northerly NE cor. of 200-ac. tract, Thomas Sproggins Sur. Drlg. shale and lime 4,002 ft.

Texas Co.'s No. 7 Houston Oil Field Assn., 347.5 ft. S and 441.9 ft. W of NE cor. of Lot 8.

(Continued on Page 73)

Compressor Regulator

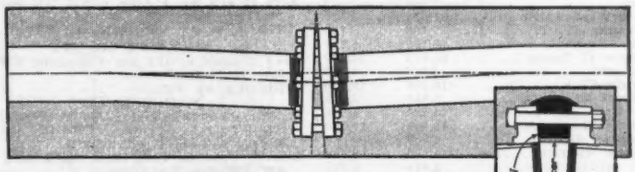
Speed Pump

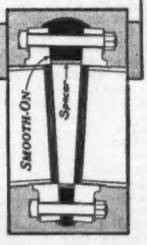
Regulation Made Definite and Sure

EXCESS discharge pressure is relieved, discharge kept constant, and operation of the compressor at full speed made safe, by use of the C-F Compressor Regulator. As a close regulator of pressure on electric-driven pumps, it stands unrivalled. Gas, steam, air, water—in all such applications the C-F Compressor Regulator is thoroughly dependable. The lever type is here shown. A spring-loaded valve is also available and is equally sure in operation. Excess discharge pressure flows through without noticeable variation in suction line. Ask for descriptive pamphlet No. 130, also catalog of Chaplin-Fulton regulators for all requirements of gas-pressure control.

The Chaplin-Fulton Manufacturing Co.

28-40 Penn Avenue **Pittsburgh, Pa.**

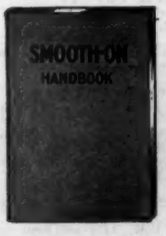




How would YOU make this joint?

Answer:—*Easily, if you seal it with SMOOTH-ON No. 1*

SMOOTH-ON No. 1 will make a tight joint at flanges that are badly out of alignment. Where the flange faces cannot be brought close together, the Smooth-On can be prevented from entering the line by inserting a ring spacer cut from old pipe and tapered at the edges to conform with the flange angle.



For correct procedure in making or repairing any balky flanged, threaded or hub joint, read the instructions in the Smooth-On Handbook.

Write for this FREE BOOK

Get Smooth-On No. 1 in 1 or 5-lb. can or 25 or 100-lb. keg from your supply house or if necessary from us direct.

SMOOTH-ON MFG. CO., Dept. 66,
570 Communipaw Ave., Jersey City, N. J.
Please send copy of SMOOTH-ON HANDBOOK.

Name .....

Address .....

11-8-34

Do it with SMOOTH-ON

Big Wells in Numerous Pools in Oklahoma Usher in November; New Gusher in Fitts District

By JAMES McINTYRE

The Oklahoma Corporation Commission has placed 459,300 bbls. per day as the average market demand for Oklahoma crude and set that figure as the allowable production for the month. The unprorated pools may produce 192,954 bbls. per day and the prorated pools, Class A, B, C and D, 266,346 bbls.

The Marathon Oil Co.'s No. 1 Keefer, C NW NW NW Section 5-13-3w, in the Edmond district, Oklahoma City, came in Sunday as a 60,000,000-foot gas well from Wilcox sand at 6,371 feet. The well, which is an offset to the same company's discovery well, has been running high on structure. No oil appeared with the gas on Sunday, but considerable gasoline was being produced. Workers made a short line connection on one of the upper gates, lessening the pressure, and it was said they would attempt to operate pumps with the gas pressure.

Carter Oil Co.'s No. 1 Fletcher, SE cor. Section 4-25-6, South Burbank Pool, Osage County, produced 1,542 bbls. the first 13 hours from Burbank sand at 2,690-2,725 feet.

Enterprise Transit Co.'s No. 2 Kennedy, SE cor. Section 34-26-6, South Burbank, made 568 bbls. of oil in five hours from Burbank sand topped at 2,792 feet, first oil at 2,820 feet.

Estimated Production

Estimated production by pools in Oklahoma for the week ending November 3 and for the preceding week follows:

	Barrels	
	Nov. 3	Oct. 27
Allen	7,100	7,625
Asher-West Asher	1,625	1,525
Burbank	9,100	9,100
South Burbank	8,750	8,750
Balance of Osage	25,000	25,000
Blackwell	4,800	4,800
Bristow-Slick	10,250	10,250
Crescent	3,650	3,175
Cromwell	4,400	4,425
Cushing-Shamrock	13,500	13,500
Chandler district	6,000	6,000
Duncan district	4,300	4,300
Fish	5,675	5,325
Fitts	950	1,550
Gray	1,175	2,000
Graham	3,650	3,650
Healdton	9,250	9,250
Hewitt	4,750	4,750
Holdenville	2,600	2,650
Keokuk	800	1,050
Konawa	1,850	2,000
Lucien	6,550	8,700
Marshall-Lovell	1,100	1,100
Oklahoma City	108,950	125,300
Papoose	1,250	1,250
Sholem-Alechem	4,100	4,100
Seminole Field:		
Bowlegs	9,275	10,850
Carr City	3,200	5,250
Earlsboro	8,350	9,760
East Earlsboro	5,950	8,575
South Earlsboro	475	975
Little River	10,825	13,500
East Little River	475	650
Maud	975	1,250
Mission	2,500	2,950
Seminole	8,050	10,325
East Seminole	1,075	1,200
Searight	2,075	2,500
Total Seminole	53,225	67,785
St. Louis-Pearson	15,800	15,450
Tatums	5,700	5,725
Tonkawa-Garber-Thomas	6,300	6,300
Wewoka	4,200	4,200
Yale-Jennings	4,750	4,750
Other pools	61,350	61,215
Total Oklahoma	400,450	439,550

Slick-Urschel, Inc.'s No. 2 Reed, C SW NE SE Section 31-7-8, on the Seminole County side of the Fish Pool, found Wilcox sand at 4,211 feet and drilled to 4,217 feet. The well produced 1,115 bbls. the first 11½ hours.

Mid-Continent Petroleum Corp.'s No. 2 Harjoge, C NW SE SE Section 31-7-8, started off at 445 bbls. in three hours. It had Viola lime at 4,162 feet and was bottomed at 4,214 feet in Simpson dense, top not ascertained.

Burke-Greis Oil Co.'s No. 1 Yekcha, C SW SW NW Section 29-7-8, set pipe at 2,970 feet in Wapanucka lime, Seven-inch casing was set at 2,970 feet and the hole drilled to 3,015 feet. It flowed and swabbed 600 bbls. in 24 hours.

Carter Oil Co.'s No. 1 Weldy, C SW NE Section 2-11-8, Seminole County, was acidized in a pay at 3,906-48 feet and later flowed and swabbed 314 bbls. in 18 hours.

Carter Oil Co. was drilling at 7,226 feet in No. 1 T. H. McCausland, C NW NW SW Section 22-1s-4w, Stephens County, a wildcat, said to be the deepest test ever drilled in southern Oklahoma.

E. H. Moore and others' No. 1 Woodruff, C SW NW SE Section 29-2-7, Pontotoc County, is the latest big well in the Fitts Pool. It made 600 bbls. the first hour and 30 minutes from bromide at 3,925-4,156 feet.

Osage County

Completions in Osage County numbered nine, including the following wells:

A. H. Kashiske' No. 8 Carroll, SW SE SW Section 15-26-6, Bartlesville sand at 2,708-53 feet, flowed 90 bbls. naturally in 12 hours; shot with 10 quarts, flowed 190 bbls. in 24 hours.

Sinclair Prairie Oil Co.'s No. 3, NW NW NE Section 21-25-6, Burbank sand at 2,815-41 feet, pumped 45 bbls. in 24 hours.

Lewis Production Co. and the Texas Co.'s No. 1 Kennedy, SE SE SW Section 9-24-7, Bartlesville sand at 2,614-53½ feet, flowed 75 bbls. naturally in 24 hours, shot with 70 quarts, flowed 296 bbls. and 1,000,000 feet of gas in 24 hours. Same companies' No. 2 Kennedy, SW SE SW Section 9-24-7, Bartlesville sand at 2,672-99 feet, flowed 300 bbls. naturally in 24 hours, shot with 25 quarts, flowed 575 bbls. in 24 hours. Same companies' No. 3 Kennedy, SE SW SW Section 9-24-7, Bartlesville sand at 2,637-64 feet, flowed 330 bbls. naturally in 24 hours, shot with 20 quarts, flowed 584 bbls. in 24 hours.

Sinclair Prairie Oil Co. and Peters Petroleum Corp.'s No. 8, SE NW NE Section 24-24-7, sand at 733-38 feet, shot with 30 quarts, 40 bbls. in 24 hours.

Bay Oil Corp.'s No. 3, SE NE NW Section 13-23-7, dry and abandoned at 2,858 feet, after penetrating Big Lime, Oswego, Pink lime, Bartlesville, chat, green shale and Hominy sand.

Indian Territory Illuminating Oil Co. and Platter's No. 2, NE SE NW Section 30-22-9, sand at 391-426 feet, 3 bbls. in 24 hours. It was drilled to 492 feet and plugged back to 450 feet.

Sand Springs Home's No. 3, SE NE SE Section 2-20-10, dry and abandoned in Mississippi lime at 2,245 feet. It found Tucker and Burgess sand, but no Bartlesville.

A. H. Kasishke has cellar dug for No. 9 Carroll, NW SE SW Section 15-25-6, and has cellar dug for No. 3 Swanson, NE SE NW Section 21-25-6. The Texas Co. is preparing to deepen an old well, No. 4, SW SE NE Section 29-25-8, present total depth 1,113 feet. Phillips Petroleum Co. has machine in for No. 16, NW SE NE SE Section 31-24-12, corrected location, previously reported as C SE SW SE. Bay Oil Corp.'s and Norbla Oil Co. made a location for No. 1, NW cor. Section 30-22-8. Indian Territory Illuminating Oil Co. and Platter made a location for No. 3, NE SE SE NW Section 30-22-9. Turman Oil Co. will deepen No. 1, SW NW SW Section 11-21-8, present total depth 2,339 feet.

Noble County

In the Polo Pool in Noble County, Stanolind Oil & Gas Co.'s No. 1 DeBord, NW NW SE Section 27-22-2w, had dolomite at 4,813 feet with a showing of gas and oil at 4,828-30 feet. The hole filled 2,500 feet with oil. Drilling was continued and Wilcox sand was topped at 4,836 feet and the hole was drilling at 4,852 feet and flowing by heads at the rate of 65 bbls. per day. Same operator's No. 1 DeVore, SW SW NW Section 27-22-2w, was rigging up standard tools after running 7-inch to 4,787 feet. Viola lime was topped at 4,762 feet. Same operator was rigging up standard tools to complete No. 3 Voss, NE NW SE Section 28-22-2w, total depth 3,807 feet, and No. 4 Voss, NE NE SE Section 28-22-2w, at 4,760 feet.

In the Lucien Pool, Shell Petroleum Corp. had started drilling No. 1 Tate, NE NW NW Section 29-20-2w, and was setting 15½-inch pipe at 275 feet.

Marathon Oil Co. was moving in rotary at No. 1 Gilbert, NE cor. Section 24-22-2e.

Creek County

G. P. Slater completed No. 1 Field, SW cor. SE Section 7-18-10, Creek County, in sand at 1,938-84 feet. It was shot with 150 quarts and pumped 108 bbls. the first 24 hours. Slater Brothers made a location for No. 1 Martin, NW NW NE Section 18-18-10, and Indo Oil Co. had machine in for No. 1 Stanley, SE SW SE Section 33-18-10.

Logan County

Paramount Oil Co. was building rig for No. 1 Hull, NW NW SW Section 12-18-4w, Logan County.

Lincoln County

In the West Chandler Pool in Lincoln County, Sinclair Prairie Oil Co. completed No. 2 Hopkins, a 50-bbl. well in Wilcox sand at 4,997-5,006 feet.

Coline Oil Co. will deepen No. 2 Telford, SW NW SE Section 7-14-4, in the Chandler Pool, total depth 4,987 feet, and was rigging up standard tools.

Magnolia Petroleum Co.'s No. 7 Telford, NE SW SE Section 7-14-4, flowed 607 bbls. in 24 hours from second Wilcox sand at 5,007-18 feet and was completed.

Oklahoma County

R. Carl Larkin is digging cellar for a wildcat test, No. 1 Brobine, NW NW NE Section 33-13-3w, Oklahoma County.

In the Oklahoma City Pool, Phillips

Wildcat Operations in Oklahoma

Week Ending November 3

NORTHERN OKLAHOMA

ALFALFA COUNTY

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,480 ft.; lost tools and S.D.

BECKHAM COUNTY

Fred Coogan et al's No. 1 Shelton, SW cor. Sec. 33-10-25w.
Rigging up rotary.

CADDO COUNTY

H. W. Lee et al's No. 1 Stacey Ferrell, SW NE NE Sec. 3-6-13w; (2,000-ft. test).
T.D. 736 ft.; U.R. 12-in. csg.

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w.
T.D. 11,230 ft.; fishing for 6-in. csg.

CLEVELAND COUNTY

Anderson & Kerr et al's No. 1 Wilson, NW SE Sec. 27-10-1e.
Wilcox sand 6,253-77 ft., T.D.; no showing; P.B. to 5,740 ft.; time bomb exploded prematurely at 3,150 ft.; 5,000 ft. of wtr. in hole; will abdn.

Mid-Continent Pet. Corp. et al's No. 1 Collett, C E½ NE SW Sec. 35-10-1w.
T.D. 6,443 ft.; drill pipe stuck.

COAL COUNTY

Moore & Deaner's No. 1 Edward, NW NE SE Sec. 27-2-8.
T.D. 7,102 ft.

J. D. Petty Oil Co.'s No. 1 McMillan, SW NW NE Sec. 16-1s-8.
Drlg. 865 ft.

GARFIELD COUNTY

Ross Cummings et al's No. 1 Gage, SE NW Sec. 27-22-3w.
Spudded and S.D.

GARVIN COUNTY

William H. Atkinson et al's No. 1 Pharoah, NW cor. Sec. 15-3-2w.
Drlg. 5,827 ft.

National Prod. Co.'s No. 1 Littrell, NE cor Sec. 31-2n-3w.
T.D. 615 ft.; U.R. 12½-in. csg.

GRANT COUNTY

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-3w.
T.D. 4,258 ft.; fishing.

Sultan Oil Corp.'s No. 1 Patton, SW SE Sec. 19-29-3w.
Wilcox sand 4,320 ft.; coring 4,324 ft.

HARPER COUNTY

Sinclair Prairie Oil Co.'s No. 1 Neff, NW SE Sec. 21-26-24w.
Drlg. 6,960 ft.

HUGHES COUNTY

Evans & Morris' No. 1 Day, NW NW SW Sec. 30-6-10 (700-ft. test).
Machine.

Freeman et al's No. 1 Kite, NW NW NE Sec. 8-6-10.
Machine.

Turner et al's No. 1 Williams, SW cor. Sec. 35-7-10.
Rig.

KAY COUNTY

Bay Oil Co.'s No. 1 Holden, SW SW SE Sec. 14-28-3.
Rigging up standard tools.

Carter Oil Co.'s No. 1 Fowler, C NE Sec. 12-27-1e.
Spudding.

S. R. McCorkle et al's No. 1 Smith, SW cor. Sec. 6-26-4.
Bldg. rig.

KINGFISHER COUNTY

Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-6w.
T.D. 7,612 ft.; drill pipe pulled; S.D.

LEFLORE COUNTY

East Okla. O. & G. Co.'s No. 1 Metcalf, SW cor. Sec. 2-4-26.
T.D. 2,040 ft.; hole caved; S.D.

Murdock et al's No. 1 fee, SW NE SW Sec. 15-5-25e.
T.D. 2,435 ft.; S.D.

LINCOLN COUNTY

Tom Bennett et al's No. 1 Bolby, C SE SW Sec. 27-12-2.
Cored 5,065-81 ft.; will run csg.

R. L. Kemp and Comail Oil Co.'s No. 1 Dooley, NE SW Sec. 20-17-6.
Drlg. 469 ft.

Derrickson and Reserve Pet. Co.'s No. 1 Law, SE SW NE Sec. 25-14-3.
Rig on ground.

M. Murray and Ralph Day's No. 1 Rittenhouse, NW NW NE Sec. 26-14-6.
Mayes lime 3,812 ft.; drlg. 3,900 ft.

Sinclair Prairie Oil Co.'s No. 1 Hoyt, NW SW NE Sec. 5-14-3.
Drlg. 570 ft.

Sinclair Prairie Oil Co.'s No. 1 Boland, SW cor. Sec. 25-12-3.
T.D. 5,455 ft.; R.U. standard tools to deepen.

LOGAN COUNTY

W. N. Anthony's No. 1 Fruin, SE SW Sec. 4-16-1.
Wilcox 5,265-85 ft.; P.B. to 5,181 ft.; will shoot Misener sand.

Gypsy Oil Co. and Sinclair Prairie O. & G. Co.'s No. 1 Manning, C NW NW Sec. 3-17-4w.
T.D. 6,411 ft.; will test Layton sand.

Helmerich-Payne et al's No. 1 Sturgis, SE NW.
Moving in tools.

Sinclair Prairie Oil Co. et al's No. 1 Dunbar, Sec. 25-15-4w.
Rig on ground.

NOBLE COUNTY

Marathon Oil Co.'s No. 1 Gilbert, NE cor. Sec. 24-22-2.
Moving in rig.

OKFUSKEE COUNTY

Delton Oil Co.'s No. 1-A Pixico, SE cor. Sec. 7-11-8.
Location.

OKLAHOMA COUNTY

R. Carl Larkin's No. 1 Brobine, NW NW NE Sec. 33-13-3w.
Digging cellar.

Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; 400 ft. drill pipe in hole; S.D.

(Continued on Next Page)

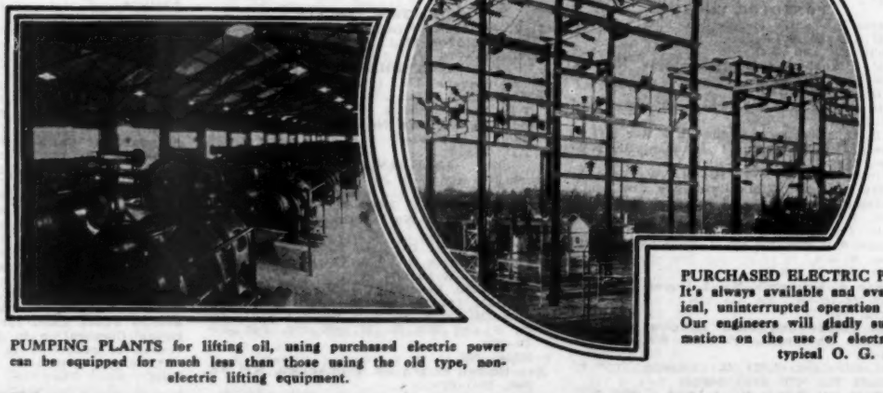
GREETINGS MEMBERS A.P.I.

Dallas, November 12-15

ELECTRIC POWER

PIPE LINE pumping stations equipped to use Electric power require an investment of only about 1/3 to 1/4 of that of other forms of power.

DRILLING costs are cut to a minimum when you use purchased electric power. It prevents costly breakdowns, lowers maintenance costs, eliminates waste and the need for large quantities of water.



PUMPING PLANTS for lifting oil, using purchased electric power can be equipped for much less than those using the old type, non-electric lifting equipment.

PURCHASED ELECTRIC POWER lowers operating costs. It's always available and ever dependable. Enjoy economical, uninterrupted operation over a longer period of time. Our engineers will gladly supply you with complete information on the use of electric power. In the circle is a typical O. G. & E. substation.

REFINERIES find purchased electric power is more economical, too. Here is a view of one of the many refineries which Oklahoma Gas And Electric Company serves.

OKLAHOMA GAS AND ELECTRIC COMPANY

Commercial Department

OKLAHOMA CITY OKLAHOMA

Petroleum Co.'s No. 1 Ownbey, NW NW SE Section 22-11-3w, was plugged back from its old total depth 6,565 feet to 5,776 feet, and Cleveland sand was shot at 5,544-76 feet and 5,543-71 feet and the well produced 596 bbls. in 24 hours on the gas lift. Same company's No. 3 Wallace produced 196 bbls. in 20½ hours on the gas lift producing from Wilcox sand at 6,459-6,542 feet. This well has never been completed. It came in early in August.

Ray Stephens and others completed No. 1 Marydun, CWL SW SE NE Section 22-11-3w. It swabbed 925 bbls. in 24 hours from Wilcox sand at 6,444-6,627 feet.

Nebo Oil Co.'s No. 3 Little and others, NE SE NW NE Section 27-11-3w, is a 50-bbl. pumper at 6,450-6,595 feet and was completed. Last July it swabbed an average of 140 bbls. per day after a shot.

Greater Seminole Field

Carter Oil Co. and others' No. 1 Stake, C-28, C S half NE SW Section 35-11-6, in the Keokuk Field, Seminole-Okfuskee Counties, was completed after it had made a 365-bbl. initial production from Misener sand at 4,143-53 feet, which had been acidized.

Carter Oil Co. made a location for No. 1 King, C NE SW Section 2-11-8, and Delton Oil Co. made a location for No. 1 A. Fixico, SE cor. Section 7-11-8.

Carter Oil Co.'s No. 1 E. Welty, C SW NE Section 2-11-8, cemented off water and acidized Hunton lime topped at 3,900 feet, total depth 3,945 feet.

Ray Dorris and J. T. Hall made a location for No. 1 Dorris, SE SE SW Section 31-10-7, Seminole County.

Atlantic Oil Producing Co. completed No. 1 Boyd, C W half SW SE Section 7-9-5, Earlsboro district, Pottawatomie County. It had been acidized. Hunton lime was topped at 4,115 feet and Sylvan at 4,131 feet, total depth.

Carter Oil Co. completed No. 4 Knapp, NW NW SW Section 13-9-6, Seminole City district, an old well plugged back from 4,296 feet to 4,128 feet. Hunton lime was topped at 4,046 feet and it was acidized. The hole was dry in the Wilcox sand.

W. D. Grisso and others' No. 1-A Kenyon, C NE SE Section 3-8-4, Pottawatomie County, was acidized in Hunton lime at 4,050-60 feet and it later flowed 552 bbls. of oil in 16 hours.

Phillips Petroleum Co. was moving in rotary to start No. 1 Bayliss, C NW SE Section 3-8-4, and Minnehoma Oil Co. spudded No. 1 Hill, C SE NE Section 3-8-4.

Turman Oil Co.'s No. 1 Hubbard, SW SW NW Section 29-8-4, had Hunton lime at 4,277-87 feet. It flowed 624 bbls. naturally in 24 hours.

The Texas Co. was moving in rotary for No. 2 Carliner, SW NW SE Section 27-8-8, in the Wewoka district, Seminole County.

In the South St. Louis district, Smith & Scott completed No. 1 Goodin, SW NE NW Section 3-7-4. It flowed 1,008 bbls. of oil in 24 hours from Hunton lime at 3,941-62 feet, which had been acidized.

Hunton Oil Co. made a location for No. 1 Walker, SE SE SW Section 7-7-4, and had cellar dug for No. 1 Willis, SW SW SE Section 7-7-4.

Mid-Continent Crude Oil Purchasing Co. abandoned the location for No. 2 Bewley, NE NW SE Section 9-7-4, upon which rig had been built.

Phillips Petroleum Co. completed No. 2 Duff, NW NW SW Section 10-7-4. It made an initial production of 63 bbls. of oil and 112 bbls. of water. It had been drilled to 4,248 feet, finding only water in the dolomite, and was plugged back to 3,998 feet, just above Viola lime. Hunton was topped at 3,668 feet.

L. M. Russell's No. 1 White, NE NE NW Section 18-7-4, was acidized in Hunton lime at 3,818-74 feet and flowed 120 bbls. in 30 hours and was reacidized.

Magnolia Petroleum was rigging up standard tools to deepen No. 1 Ogle, NW NE SW Section 22-7-4. Shell Petroleum Corp. was preparing to plug back in No. 1 Yonts, NW NW SW Section 28-7-5, old total depth 4,351 feet.

Magnolia Petroleum Co. was rigging up rotary for No. 2 Dole, NW SE SW Section 16-7-8. T. C. Inglehart was moving in rotary for No. 1 Rogers, NE NW NW Section 32-7-8.

Bishop Oil Co. completed No. 1 Zoller, CEL NE NW NE Section 6-6-5, in dolomite at 4,005-4,188 feet, total depth 4,190 feet, in sand. It produced 176 bbls. in 24 hours. The well had been acidized at 4,005-50 feet and had produced 50 bbls. in 24 hours on the swab and was then cored and drilled deeper.

Moran and others' No. 1 Brinlee, a wildcat, SW SW NE Section 27-6-5, had sand at 2,662-75 feet, total depth 2,698 feet. The well flowed 25 bbls. of oil in 65 minutes.

Roy J. Pierce had rig up for No. 1-A Spillman, C SW SW Section 7-6-8, Seminole County.

Evans & Morris have machine in to start a wildcat test, No. 1 Day, NW NW SW Section 30-6-10, Hughes County.

Pontotoc County

Wallace & Nichols have a 15-bbl. completion in No. 1 Stringer, NE NE SE Section 28-5-6, Pontotoc County.

Jarrett Petroleum Co.'s No. 1 Johnson, SE SE NW Section 28-4-4, was dry and abandoned at 1,915 feet in Wilcox sand. It was plugged back to 1,650 feet and Viola lime was shot but without results.

In the Fitts Pool, Magnolia Petroleum Co.'s No. 1 Craddock, SE cor. Section 24-2-6, was heavily acidized at 4,138-4,503 feet under 1,000 pounds pressure. It flowed 625 bbls. in 19 hours and later flowed 264 bbls. in a 24-hour test. Viola lime was topped at 4,138 feet and the hole was bottomed above the bromide. The well had originally been drilled to 4,528 feet, but found only water in the bromide topped at 4,521 feet.

J. C. Shaffer and others' No. 1 Norris Royalty Co., SE NW SE Section 25-2-6, had bromide at 4,035 feet, sand at 4,120-70 feet and 4,210-43 feet, total depth 4,249 feet, in lime. It flowed 205 bbls. in one hour through 2½-inch tubing.

Magnolia Petroleum Co.'s No. 1 Harden, SW NW NE Section 30-2-7, drilled to 4,400 feet, was plugged back to 4,274 feet, where it made a flow of 30 bbls. of oil. The plug was drilled out to 4,300 feet, and it flowed 473 bbls. of oil in 16 hours from pay at 4,284-4,300 feet.

Same company's No. 2 Hardin, SE NW NE Section 30-2-7, has bromide from 4,185-4,250 feet. Two and one-half inch tubing was run to a depth of 4,132 feet and the well flowed 65 bbls. in 24 hours.

New work in Pontotoc County included Petroleum Shoreline's No. 1 Walters, SE cor. Section 8-4-8, an Allen sand test, running 5-inch casing to 750 feet; Carter Oil Co.'s No. 3 Craddock, SW SE NE Section 24-2-6, a location; Magnolia Petroleum Co.'s No. 3 Tom Norris, NE NW SE Section 25-2-6, a location; Carter Oil Co.'s No. 3 Harden, NE NE SW Section 30-2-7, a location.

In Southern Counties

Charles Newsome completed No. 1 fee, NE NW NE SE Section 36-7s-5e, Marshall County, a 10-bbl. well at 456-68 feet.

Goddard Oil Co.'s No. 2 Tallieferro, SW SE SW NE Section 14-5s-5e, was spudded.

In Carter County, Haward, Chamberlain and others were rigging up rotary for No. 1-A Johnson, a twin, SW SE SW Section 17-4s-2w.

Murphy and Boggs were rigging up rotary to start No. 1 Eaves, SW SE SE Section 30-1s-2w.

Samedan Oil Co. completed No. 3 Higgins, NE cor. Section 36-1s-3w, had broken sand at 2,418-2,562 feet and the well swabbed 152 bbls. of oil in 24 hours.

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-5.
H.F.W. 3,040 ft.

Reva Oil Co.'s No. 2-B, NW SW SW Sec. 29-28-11.
Comp.; 300,000 ft. gas, 800-37 ft.

PITTSBURG COUNTY

McAllister Pet. Co. et al's No. 1 Chunn, SE NW Sec. 29-4-14.
Set 12¼-in. pipe 249 ft.

P. H. Gray et al's No. 1 Lee, NW SE Sec. 12-5-13.
S.D. 160 ft.

W. E. Hailey's No. 1 Drew, NW SW Sec. 21-3-14.
S.D. 190 ft.

PONTOTOC COUNTY

Charles E. Carter et al's No. 1 Wood, NW SW SE Sec. 5-4-3.
Spudded and S.D.

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-2-6.
S.D. 2,920 ft.

Boyle et al's No. 1 Newbern, SW NE Sec. 21-5-4.
P.B. to 2,080 ft. and shot; H.F.W.; S.D.

Jarrett Pet. Co.'s No. 1 Johnson, SE NW Sec. 28-4-4.
Wilcox sand 1,915-28 ft.; H.F.W.; P.B. to 1,650 ft.; shot Viola lime; dry and abd.

Dandridge et al's No. 1 Stafford, NW cor. Sec. 5-1-6e.
T.D. 740 ft.; S.D.

Gillette & Kroeger's No. 1 Robbins, NE SE Sec. 31-1-4.
T.D. 760 ft.; S.D.

Gillette & Kroeger's No. 1 Duver, NW SE Sec. 36-1n-6e.
Drlg. 760 ft.

J. D. Sledge and Jack Lynch's No. 1-A (twin) Thompson, SW NE SW Sec. 1-1n-7e.
Set 8-in. csg. 3,815 ft.; Hunton lime 3,830-36 ft.; will drill plugs.

Southern Oil Corp.'s No. 1 Ladd, C NW NW Sec. 27-3-7.
Drlg. 535 ft.

POTTAWATOMIE COUNTY

Blackgold Pet. Co.'s No. 1 Bizzell, C NE NW Sec. 15-7-3.
Spudded.

Moran et al's No. 1 Brinlee, SW SW SE Sec. 27-6-5.
T.D. 2,698 ft.; flowed 25 bbls. in 65 min.

W. D. Grisso et al's No. 1-A Kenyon, C NE SE Sec. 3-8-4
Hunton 4,050-67 ft.; acidized; flowed 552 bbls. in 16 hrs.

SEMINOLE COUNTY

Anderson & Kerr et al's No. 1 Baumgartner NW NW SW Sec. 7-10-8.
Drlg. 1,670 ft.

Harris and Haun's No. 1 Harjo, NE SE NW Sec. 11-6-8 (O.W.P.B.).
P.B. to 2,115 ft.; shot; H.F.W.; S.D.

Mudge Oil Co.'s No. 1 Whitney, SE NW Sec. 9-6-7.
Sand 1,935-36 ft.; swbd. 45 bbls. oil and 45 bbls. of wtr. in 12 hrs.

Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-6.
T.D. 2,100 ft.; rigging up standard tools.

TEXAS COUNTY (PANHANDLE)

Ben F. Ash et al's No. 1 Guymon Townsite, C NE SE Sec. 30-3n-15e (Cimarron Meridian).
Drlg. 1,810 ft.

WASHITA COUNTY

Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 33-9-17w.
Rigged up and S.D.

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
T.D. 2,430 ft.; lost tools in hole; rig rebuilt; S.D.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3s-10e.
T.D. 3,709 ft.; drlg. up baller.

J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e.
S.D. 1,135 ft.; machine moved out.

L. A. Fitts' No. 1 Blankenship, NE cor. NW Sec. 19-2s-10e.
T.D. 651 ft.; S.D.

T. C. Ramler et al's No. 1 Roberts, SW SE SW Sec. 6-2s-12e.
Drlg. 1,175 ft.

CARTER COUNTY

Daphfine Oil Co.'s No. 1 Hooks, SE NW NW SE Sec. 5-1s-2w.
Drlg. 2,850 ft.

CHOCTAW COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-4s-20e.
S.D. 810 ft.

COMANCHE COUNTY

F. F Stevens' No. 1 Green, SE SW Sec 2-1-13w.
T.D. 1,210 ft.; drlg. by tools.

Heiden & Taylor's No. 2 Crutcher, C NE Sec. 11-1n-12w.
T.D. 863 ft.

JACKSON COUNTY

Burk Royalty Co.'s No. 1 Gore, SE NW SE Sec. 2-1s-20w.
S.D. for wtr. at 1,600 ft.

Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,769-11 ft.; T.D. 1,723 ft.; S.D.

Gypsy Oil Co.'s No. 1-A (Twin) Kelly, NE cor. Sec. 10-1n-20w.
Shot with 10 qts. at 1,150-70 ft.; 300,000 ft. gas; 140 lbs. pressure.

Gypsy Oil Co.'s No. 1-B Kelly (twin), 280 ft. S and 280 ft. W. SE cor. Sec. 10-1n-20w.
Bldg. rig.

Ben Russell et al's No. 1 Unknown, NW SE Sec. 30-1-22w.
Moving in heavier rotary; T.D. 3,974 ft.

JEFFERSON COUNTY

Geo. Pace et al's No. 1 Jack, NE NW NW Sec. 10-4s-4w.
Drlg. 2,963 ft.

H. F. Young et al's No. 1 Boulden, SE SW SW Sec. 1-7-4w.
Location.

JOHNSTON COUNTY

Gled Oil Co. et al's No. 1 Ferguson, SW SE NE Sec. 26-2s-8.
Drlg. 1,450 ft.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
T.D. 4,933 ft.; circulating.

MURRAY COUNTY

T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-2.
Sand 2,658-70 ft.; show of oil; T.D. 2,710 ft.; S.D.

C. P. Williams et al's No. 1 Singleterry, SE SW NW Sec. 25-2s-3e.
Drlg. 496 ft.

STEPHENS COUNTY

Wm. Angle's No. 1 Johnson, NE cor. SE Sec. 17-1n-8w.
Cored sandy shale 2,127-30 ft.; showing of oil; running core barrel.

Carter Oil Co.'s No. 1 McCasland, C NW NW SW Sec. 23-1s-4w.
Drlg. 4,945 ft.

Dixie Oil Co., Inc.'s No. 1 Graham, SW SE SW Sec. 13-1n-7w.
Rig.

Heenan & Coe's No. 1 Hefner, SE NE SW Sec. 13-3s-7w.
T.D. 2,100 ft.; moving out tools.

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
Rig down, drill pipe in hole; S.D. 2,220 ft.

Gasoline Allocation Appeals Decline Sharply in October

Decisions on 22 appeals for increased gasoline allocation for October were made by the Refinery Board of Review which met in Washington. The number of cases handled this month approximates half of the September total. Of the 22 appeals, 16, or about 75 per cent, were denied. Judgment of the Texas company's appeal was withheld pending further information.

Appellant	Refinery district	Increase requested No. Bbls.	Increase Bbls.
Kendall	2	7,500	Denied
Continental	2	2,122	1,000
Phillips	5-A	97,740	Denied
Phillips	4	5,000	Denied
Atlantic	1	95,000	Denied
Atlantic	2	78,000	Denied
Crown Central	5-B	50,000	Denied
Olney Oil	5-A	6,951	2,751
Pan American	1	N.B.	Denied
Pan American	5-B	126,000	28,000
Utah Oil	7	12,000	12,000
Rio Grande	3	53,963	Denied
Skelly	4	40,000	Denied
Standard of Calif.	3	477,736	Denied
Republic Oil	5-B	31,810	Denied
Shell	3	270,000	Denied
Continental	7	15,207	10,000
Continental	5-A	18,461	Denied
Pac. C'st Rfg. Com.	3	1,019,584	Denied
Pennzoil	3	13,000	10,000
Union Oil	3	171,967	Denied
Texas Co. of Calif.	3	40,000	(*)
Magnolia	5-A	22,158	Denied

N.B. Exception to maximum allowable inventory fixed by District Committee which affects quota fixed for Pan American Refining Corporation in District No. 5-B by reason of reduction in its demand.

*Decision withheld pending receipt of brief.

ST. THOMAS GAS SURVEY

ST THOMAS, Ontario, Nov. 3.—In connection with proposals to introduce the use of natural gas here, Col. R. B. Harkness of Toronto, natural gas commissioner for Ontario, has commenced an independent survey of the municipal gas system. Colonel Harkness, at the request of the city council, will advise on the desirability of changing the municipal plant from artificial to natural gas and upon the merits of competitive offers of natural gas in wholesale quantities submitted by Bon Jasperson of Kingsville and W. F. Kingston of St. Thomas.

BERGESON IN NEW CAPACITY

Owing to enlarged duties the positions of assistant treasurer and general auditor of Standard Oil Co. (Indiana), heretofore combined, have been separated. W. D. Roberts continues as assistant treasurer, and C. T. Bergeson, assistant general auditor, has been promoted to general auditor.

Mr. Bergeson joined the company in 1916 as a junior clerk and has advanced through various auditing and accounting positions to his new post.

Two Wildcats Prove Failures in North Louisiana; Brisk Drilling There and in Arkansas Area

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Nov. 5.—Two of the wildcats nearing the expected pay horizon last week faded entirely out of the picture as possible producers from the shallow Wilcox and the Blossom sand, and a third, a Trinity test, seems doomed as a failure. To offset these disappointments the North Louisiana district reported 4 oil wells and 2 gassers out of 8 completions and the Arkansas district registered 3 producers out of as many completions. Drilling activity continues at a brisk rate with 15 new operations staked, 12 in North Louisiana and 3 in Arkansas.

NORTH LOUISIANA

T. L. James' No. 1 Harrison, Section 2-16-6, southeast of Arcadia in Bienville Parish, logged the base of the chalk at 2,535 feet and contacted the top of the Blossom at 2,799 feet. A drill stem test in this formation developed 660 feet of salt water in six minutes and the test was abandoned at 3,005 feet. The wildcat is one of numerous failures in that part of Bienville Parish in search of Blossom production on the flanks of salt domes. In Winn Parish, Red River Refining Co.'s No. 3 Tremont Lumber Co., Section 26-11-1w, topped the Wilcox at 1,359 feet and was abandoned in salt water at 1,379 feet. This is the third failure in that immediate vicinity during the year to find a reported oil sand in a well drilled there several years ago.

Two of the producers were in old Caddo Parish proven areas. Shoreline Oil Co.'s No. 3 S. P. Harrell, Section 2-21-16, Hosston area, is pumping 12 bbls. daily from 1,032 feet, and Shreveport Oil Corp.'s No. 1-C Muslow, Section 4-20-15, is a 30-bbl. pumper from 2,182 feet. In the Urania Field, La Salle Parish, an area which produces from the Claiborne-Wilcox contact at a shallow depth, J. B. Collins' No. 1 Urania, Section 7-10-2e, is pumping 25 bbls. daily from 1,525 feet. An area in the old Naborton Field, most of which is in De Soto Parish, which had been circled by dry holes years ago, furnished a fair flowing well, Circle W and Windsor Oil Co.'s No. 1 Jenkins estate, Section 4-12-11, is flowing 40 bbls. daily through 2-inch tubing from the Tokio at 2,729 feet. The present well is on the flank of the old producing area just inside of Red River Parish.

Ouachita Parish furnished both of the gas wells. Maury Drilling Co.'s No. 4 Frierson, Section 30-19-4e, gauged 1,261,000 feet with 695 pounds rock pressure from 2,179 feet. United Gas and Magnolia Petroleum Co.'s No. 1 fee, Section 26-19-3e, had an initial open flow of 1,800,000 feet and 950 pounds rock pressure from 2,180 feet.

New Locations

With two exceptions, all of the new locations staked in the North Louisiana district were in proven territory. Bossier Parish added impetus to its wildcatting campaign with the announcement of two new blocks on which operations have already begun on one and a contract signed for a Blossom test on the other. The Leonard Co. of Chicago, which has taken over the drilling operations of Shoreline Oil Co. of Shreveport in this area, has assembled a block of approximately 5,000 acres northwest of the town of Benton in Bossier Parish on the east side of Red River from Caddo Parish. It is understood a series of four tests will be drilled on the block over a period of 18 months, and the first, No. 1 Pearson, Section 22-21-14, has spudded in and is drilling at 100 feet. This block of acreage is a few miles east of shallow production in Caddo Parish and the company is attempting to discover new shallow production for its new refinery recently completed at Lewis in Caddo Parish. M. J. Grogan, formerly vice president of the Louisiana Oil Refining Corp., is active manager of the operating, refining and marketing units of these companies in the North Louisiana and East Texas districts.

About 3 miles northeast of the town of Plain Dealing, Bossier Parish, F. F. Meadows is reported to have under lease a 7,000-acre block centering around Section 34-23-13, and has announced location for No. 1 Bolinger Lumber Co. near the center of Section 35-23-13. The test has a contract to drill a 3,200-foot hole which will contact the Blossom in that area. A deep test on the northern edge of the Sligo gas field, United Gas Public Service Co.'s No. 2 Skannell unit, Section 14-17-12, is testing in the upper Trinity at 4,284 feet. It is reported the well is making over 40,000,000 feet of gas, but no official gauge has been received either on the open flow or the gasoline content.

L. M. Moffitt and others' No. 1 W. H. Martin estate, Section 2-21-12, a third test on a block of 18,000 acres in the Rocky Mounty area in the northern part of Bossier Parish, is coring for the Blossom sand below 2,600 feet. Bossier and Caddo Parishes in the northwestern part of the state and two of the oldest producing areas in this district are leading all other parishes in active drilling operations at this time. They are ideally located on the so-called Sabine uplift for oil and gas production from the shallow Nacatoch to the Trinity.

East of Caddo

The Ark-La-Tex Oil & Gas Co.'s No. 1 Simon, Section 15-20-15, about a mile east of the old Caddo Field, has been standardized to pump, and indications are it will be a 30-bbl. well. The oil is of 22 gravity from the chalk rock at 2,236 feet, whereas previous chalk production in the Caddo Field tested 38 gravity and above and came from 1,600 and 2,800-foot levels. T. R. Hincy's No. 1 Louisiana Central Lumber Co., Section 32-9-6e, a wildcat in Catahoula Parish, is drilling in Jackson at 960 feet.

DeSoto Parish continues to experience much wildcatting, both in unproven and semiproven territory. Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, Section 14-12-11, is setting liner to test at 2,731 feet, and Dempsey-Manziel's No. 1 Thigpen, Section 33-13-13, is drilling 8¼-inch plug at 1,660 feet and will treat the chalk rock with acid to test from a total depth of 1,730 feet. Two other tests in this parish are arranging to set 6-inch casing slightly below the 2,000-foot level. E. T. Oakes' No. 1 Bryant, Section 30-13-15, a deep test on the western border of DeSoto near the East Texas line, is shut down at 5,463 feet after an unsatisfactory test at that depth. Another deep test near the town of Natchitoches in Natchitoches Parish, Benedum & Trees' No. 1 Carver estate, Section 6-8-7, topped the marl at 3,270 feet and is drilling ahead at 3,286 feet.

ARKANSAS

The three completions in this district were all small pumpers. In Ouachita County, Sam M. Richardson & Co.'s No. 9 Goodwin, Section 32-15-15, is pumping 10 bbls. daily from 3,038 feet. J. D. Reynolds' No. 1 C. C. Guttry, Section 21-15-19, gauged the same from 2,178 feet. In the Urbana Field, Union County, McCreslenn Oil Co.'s No. 1 Union Saw Mill Co., Section 3-18-13, is a 25-bbl. pumper from 3,577 feet.

Wildcats in the South Arkansas area made slow but steady progress during the week, but none was on test. The most important announcement was that another test, contracted to drill to 5,000 feet, will be spudded soon in the Rainbow City Field, northeast of El Dorado, Union County. Short & Hayes recently started such a test with their No. 1 J. W. Taylor, Section 10-17-14, which is drilling at 3,196 feet. One mile north of Short & Hayes, Jovian Oil Co. is moving in rig on its No. 1 W. H. Perdue in Section 3-17-14. This company is a new Arkansas operating firm and is headed by George Ingalls, pioneer South Arkansas and East Texas operator.

Two new locations are reported from Woodruff County in the northern part of the state. J. N. Watkins and others are rigging up on their No. 1 Upshaw, Section 17-5-2w, and L. P. Lively is ready to spud in his No. 1 Perkins in Section 5-5n-2w.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Bell Oil Co.'s No. 1 Woodley, 330 ft. S and W NE cor. NW Sec. 11-2n-5e.
Washing to bottom 1,700 ft.

BIENVILLE PARISH

Benedum & Trees' No. 1 J. W. Sprawls, 660 ft. S, 330 ft. W, NE cor. NW NE Sec. 17-15-6.
Drlg. 4,883 ft.
T. L. James' No. 1 Harrison, SW cor. NW NW Sec. 2-16-6.
S.W. and abd. 3,005 ft.
Saline Drlg. Co.'s No. 1 Pardee, Sec. 27-14-6.
Set 10-in. 142 ft.

BOSSIER PARISH

Goldman & Sklar's No. 4 Caplis, 1,527 ft. S, 1,482 ft. E, NW cor. Sec. 25-16-12.
Set 6-in. 1,538 ft.
Howard & Baird's No. 1 Gold, 150 ft. S and E, NW cor. Sec. 36-20-13.
S.D. for water 1,126 ft.
W. A. Kirkland's No. 1 Jarrett & McKeller, 330 ft. N and W, SE cor. NW NW Sec. 3-21-13.
Set 10-in. 43 ft.
McKinney & Stewart's No. 1 Nattin, 470 ft. W, 620 ft. S, NE cor. Sec. 23-22-14.
S.D. 2,973 ft.
L. M. Moffitt, tr.'s No. 1 W. H. Martin, 329 ft. S and E, NW cor. SW NW Sec. 2-21-12.
Coring 2,600 ft.
Premier Inv. Co.'s No. 14 Wyche, 660 ft. S, 150 ft. W, NE cor. NW NW Sec. 14-19-11.
Set 10-in. 85 ft.; drlg. 160 ft.
Producers O. & G. Co.'s No. 1 Weiner, 660 ft. N and W, SE cor. Sec. 7-17-11.
Arranging to set 4½-in. at 3,984 ft.
Leonard Co.'s No. 1 Pearson, 250 ft. S and E, of C Sec. 22-21-14.
Drlg. 50 ft.
United Gas Pub. Ser. Co.'s No. 2 Skannell Unit, 990 ft. N, 660 ft. W, SE cor. Sec. 14-17-12.
Testing 4,284 ft.
United Gas Pub. Service Co.'s No. 1 Herold Unit, 50 ft. S and W, NE cor. SW SE Sec. 13-17-12.
Coring 4,097 ft.

CADDO PARISH

Ark.-La.-Tex. O. & G. Co.'s No. 1 Simon, 330 ft. N and E, SW cor. Sec. 15-20-15.
W.O.S.R. 2,236 ft.
W. T. Bell et al's No. 1 Bostick, 1,320 ft. E, 660 ft. N, SW cor. Sec. 12-22-16.
S.D. for water, 2,540 ft.
S. Bendor's No. 1 Starr, 150 ft. N, 195 ft. E, SW cor. SW Sec. 26-20-16.
W.O.S.R. 2,255 ft.
Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E, NW cor. NE SE Sec. 15-17-14.
S.D. 1,046 ft., repairing rig.
Capitol O. & G. Co.'s No. 1 Noel Est., 300 ft. S and E, NW cor. NE Sec. 12-20-16.
Abd. 450 ft.
O. L. Hickman's No. 1 fee, 1,046 ft. S, 1,700 ft. E, NW cor. Sec. 26-17-15.
Drlg. 1,400 ft.
A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
S.D. 2,128 ft.
Shreveport Oil Corp.'s No. 3-B Muslow, 742 ft. E, 710 ft. S, NW cor. Sec. 4-20-15.
Set 10-in. 80 ft.
Shreveport Oil Corp.'s No. 1 Muslow, 412 ft. N, 560 ft. E, SW cor. NW Sec. 4-20-15.
Comp.; pumping 30 bbls.; 2,182 ft.
Leonard Co.'s No. 4 S. P. Harrell, 220 ft. N and W, SE cor. NW SW Sec. 2-21-16
Rigging up.

CALDWELL PARISH

Terrell & Price's No. 1 La. Central Lbr. Co., 300 ft. N, 200 ft. W, SE cor. NW NE Sec. 13-11-3e.
T.A. 3,485 ft.

CATAHOULA PARISH

T. R. Hincy's No. 1 La. Central Lbr. Co., Sec. 32-9-6e.
Drlg. 960 ft.

DE SOTO PARISH

L. H. Alderson's No. 1 Peek, SE cor. NW NE Sec. 25-11-13.
Drlg. 300 ft.
Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, C SE NE SW Sec. 14-12-11.
Testing 2,731 ft.
Century O. & Drlg. Co.'s No. 1 Morton, 300 ft. N and E SW cor. SE NE Sec. 27-11-14.
S.D. 1,760 ft.
Jack Clarke's No. 1 Moore, 330 ft. S and W NE cor. NW Sec. 1-13-15.
S.D. 1,675 ft.
W. T. Coleman's No. 1 Rambin Est., 700 ft. S and E, NW cor. SW SE Sec. 13-12-12.
S.D. 50 ft.
Dempsey & Manziel's No. 1 Thigpen, 375 ft. S, 330 ft. W, NE cor. SW NE Sec. 33-13-13.
Drlg. plug to treat with acid, 1,730 ft.
DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11.
Drlg. 2,073 ft.
E. L. Foster's No. 1 Youngblood, Sec. 9-11-14.
R.U. to deepen 1,502 ft.
Hester et al's No. 1 Alston, 330 ft. S and W of center of Sec. 11-11-16.
Set 6-in. 2,030 ft.; T.D. 2,145 ft.
George Le Grande's No. 1 Vance, 180 ft. N and W SE cor. SW Sec. 34-13-16.
S.D. for csg. 2,030 ft.
Ben F. Smith's No. 1 Bonds, 200 ft. E, 500 ft. N, SW cor. Sec. 23-12-11.
Set 10-in. 68 ft.; drlg. 900 ft.
W. K. Williams' No. 1 Wemple, 400 ft. N, 330 ft. W, SE cor. Sec. 15-12-11.
W.O.S.R. 2,734 ft.

EAST CARROLL PARISH

Holcomb & Thomason's No. 1 Milliken, 198 ft. N, 1,240 ft. E of C Sec. 22-23-12e.
Drlg. 3,082 ft.

LA SALLE PARISH

A. D. Hudson et al's No. 1 Urania, 660 ft. W, 150 ft. N, SE cor. NE SW Sec. 7-10-2e.
Comp.; pumping 25 bbls.; 1,525 ft.
F. A. Trichello's No. 1 Urania, Sec. 3-9-1e.
Rigging up.

MOREHOUSE PARISH

Southern Carbon Co.'s No. 65 fee, 2,030 ft. S, 660 ft. E NW cor. Sec. 14-20-4e.

(Continued on Page 75)

Daily Production

Daily average production for the week ending November 3 follows:

NORTH LOUISIANA

	Bbls.
Bellevue	530
Caddo light	4,520
Caddo heavy	1,680
Converse	1,430
Cotton Valley	485
DeSoto and Red River	1,575
Elm Grove	370
Haynesville	3,755
Holly	160
Homer	2,690
Pleasant Hill	185
Sarepta-Carterville	625
Urania	3,300
Zwolle	2,320
Total	24,135

ARKANSAS

Champagnolle	1,080
El Dorado	2,370
Lisbon	355
Miller County	1,370
Nevada	875
Smackover light	2,300
Smackover heavy	13,945
Stephens	635
Urbana	3,305
Total	30,235

New Oriskany Sand Test Started in Pennsylvania; Southeast Ohio Has Week's Largest Wells

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Nov. 5.—In western Pennsylvania, another test has started for the Oriskany sand. In Muddy Creek Township, Butler County, James H. Duff and John T. Galey are drilling a test on the Lehigh Portland Cement Co. property which is scheduled for that formation. The exact location is found on the Zelienople Quadrangle six-tenths mile south, 25 degrees west of Paynes. The elevation of the derrick floor is 1,163.79 feet and the mouth of the well approximately 56 feet below the top of the Vanport limestone.

Another interesting feature of this test is that it was located after seismograph investigations during July and August after a prior test west of this one had failed of production. That test by James H. Duff and others was located in Slippery Rock Township, Lawrence County, and is found on the Zelienople Quadrangle 792 feet south of the township line road and 2½ miles north, 78 degrees east of Princeton, Pa., and on the J. Scott Munnell farm. This well also started at the base of the Vanport limestone horizon and reached a depth of 4,767 feet, considrably below the Oriskany.

The rig of the first test was torn down during October and moved to the new location on the Lehigh Portland Cement Co.'s lease and the new test spudded in on October 19. The contractor, C. L. Sample, drilled the first test and has a veteran crew, Schmidt, Mattern and Kelly as drillers and Anderson, Marburger and Buckingham as tool dressers. Complete cuttings will be taken beginning at 17 feet. The present depth is about 540 feet.

There were 17 completions and 9 dry holes in the lower eastern fields during the past week. Six were gas wells, two fair, and 11 were producers with an initial production of 146 bbls. The largest producers were in Southeast Ohio.

SOUTHEAST OHIO

In Ashland County, there were two dry holes. In the SE Section 21, Lake Township, Gold Crown Oil & Gas Co. drilled a second test on the George Horn farm through the Berea sand to 625 feet and there was only a small showing of gas and oil. In NW Section 22, Lake Township, First National Bank of Newark drilled No. 8 on the Mary M. Young farm through the same formation to 625 feet. It was also dry.

In Coshocton County, Preston Oil Co. completed a second test on the Cary D. Harris farm in Section 17, Perry Township, in the Clinton sand at a depth of 3,136 feet. It produced about 8 bbls. the first day, natural, and will make a 30 or 40-bbl. well after shot.

In Hocking County, Preston Oil Co. completed No. 1,558 on the Sunday Creek Coal Co. lease in SW Section 12, Ward Township. It is a Clinton sand well at a depth of 3,582 feet and produced 32 bbls. the first day after shot.

In Holmes County, Ohio Fuel Gas Co. completed a second test on the George W. Brown farm in Section 11, Richland Township. It was drilled in the Clinton sand at about 3,100 feet and is a gas well gauging about 1,500,000 feet a day. In Section 15, Washington Township, same operators completed a test on the Leo J. Haudenschild farm in the same formation at 3,150 feet. It is a gas well with a volume of only 130,000 feet a day.

In Jefferson County, Gregg, Cable and others drilled a test on the George M. Myers farm in Section 12, Island Creek Township through the Berea sand to 1,175 feet. It was a dry hole.

In Licking County, Park National Bank of Newark, Ohio, and others completed No. 7 on the Samuel Mossholder farm in Section 18, Fallsbury Township, in the Clinton sand at a depth of 3,118 feet. It produced 15 bbls. the first day after shot. In Perry Township, Section 17, Blue Rock Oil & Gas Co. completed No. 7 on the Walter Hoyt farm in the Berea sand at 675 feet. It produced 10 bbls. the first day after shot and will make a 3-bbl. pumper.

In Medina County, Oko Oil & Gas Co. completed No. 47 on the Jesse McVicker farm, the northwest part of Lot 2, Chatham Township, in the shallow Berea grit at 498 feet. It produced 2 bbls. the first day after shot.

In Monroe County, Starr Oil & Gas Co. drilled a test on the J. H. Shafer farm, SW Section 11, Bethel Township, through the Lime to 1,390 feet. It was dry.

WEST VIRGINIA

There were six producers completed in West Virginia during the week and considerable new work located in the oil areas. In Boone County, Pure Oil Co. completed No. 260 on the Williams Coal Co. tract in Sherman district in the Berea sand at 3,328 feet showing for 5 bbls. a day, natural.

In Ritchie County there were three producers. In the Pike Pool in Clay district, Ritchie County, Pike Oil Co. completed No. 4 on the M. S. and Lillie Riggs lease, in the Big Injun sand showing for 20 bbls. a day. On Dutchman Run in Murphy district, South Penn Oil Co. completed No. 42 on the Sarah J. Lemon farm in the Salt sand at a depth of 1,862 feet. It will make about an 8-bbl. producer. In the same district, King Knob Gas Co. completed No. 3 on the Emma V. Weinrick farm in the Maxon sand at 1,675 feet and it will make about 3 bbls. a day.

In Roane County Henderson Oil Co. completed No. 3 on the F. H. Bee, Jr., farm in Curtis district along Buffalo Creek in the Salt sand and it is rated at 10 bbls. a day from the top pay. In Smithfield district, the second test of the Sand Run Oil & Gas Co. on the Josephine Young farm was drilled through the Big Injun sand to 2,125 feet and there was not enough gas to test.

In Tyler County, American Oil Co. completed a test on the Smith and Reppard farm in Ellsworth district in the Injun sand at a depth of 2,179 feet. It will make a 1-bbl. pumper.

Gas Wells

In Boone County, Hope Natural Gas Co. completed a fair gas well in the second test on the White and Hopkins lease in Washington district. This well, formerly started by Godfrey L. Cabot, Inc., reached the Maxon sand at 2,011 feet and has a volume of about 1,250,000 feet a day. No. 1 came in at about 5,000,000 feet a day. In Sherman district, Pure Oil Co. completed No. 69 on the Federal Coal Co. lease in the Big Lime and Weir sands, total depth 2,924 feet, as a gas well with about 180,000 feet a day.

In Doddridge County, on Ella Lick of McElroy Creek, W. D. Gribble completed a second test on the M. J. Smith farm in McClellan district as a gas well in the Big Injun sand at a depth of 2,137 feet.

In Marion County the Delmar Oil Co. drilled No. 4 on the Z. E. and A. M. Batson farm in Mannington district to a total depth of 3,185 feet. It proved dry in all sands and will be plugged.

In Ritchie County, Everett Starcher and others completed a second test on the I. R. Wilson farm in Murphy district in the Injun sand at a depth of 2,013 feet. It is a gas well gauging about 1,250,000 feet a day. In Clay district, near Molehill, Glen M. McBurney and others drilled a test on the W. H. Ridgeway farm through the Injun sand and it proved dry. In the same section, Batchelor, Ray, Choguill, Inc., drilled No. 9 on the J. L. McCullough farm and plugged it in the Injun sand after it proved dry. They are skidding the rig to a new location. In Union district, Jobes and Dr. S. M. Prunty drilled a test on the R. G. Davis, now Amos Brissey farm, through the Big Injun sand to a depth of 1,829 feet. It was dry.

Reconditioning work is still in progress. In Smithfield district, Roane County, Virginian Gasoline & Oil Co .treated its No. 3 on the W. R. T. Smith farm with acid and increased production from less than 1 bbl. a day to 12 bbls. a day. In Geary district of this county, South Penn Oil Co. shot and cleaned out No. 102 on the O. D. Stockley farm and doubled the daily production.

Drilling in West Virginia

There is considerable new work in progress in West Virginia. In Boone County, Owens Illinois Glass Co. has reached 1,150 feet in No. 22 on the Peytonia Coal Co. land in Sherman district. In this district Pure Oil Co. is building a rig for No. 71 on the Federal Coal Co. lease and drilling No. 70 at 599 feet. This company has reached 2,292 feet in the second test on the Pocatello Coal Co. tract.

In Cabell County Carney Gas Co. is rigging up on the James Mills farm in McComas district. In this district John Kingery and others are drilling on the Rosa Midkiff lease. In Guyandotte district, R. H. Adkins and others are drilling at 700 feet on the J. G. Ramsey farm.

In Calhoun County, Sherman district, Godfrey L. Cabot, Inc., is building a road to a location on the Henry Kight farm. Here, McCall Drilling Co. has completed a rig on the Hildery Vanney farm. In Center district Park Bowser has made a location for No. 10 on the Dora E. Ramsburg farm. C. B. Lewis and others have started drilling deeper No. 2 on the G. S. Smith farm. Howard Brothers are spudding on the L. F. Norman farm. Park Bowser is down 210 feet in No. 9 on the Dora E. Ramsburg farm. Chemical Oil Co. has reached 775 feet in No. 7 on the Taxwell Taylor farm. In Lee district, Southeastern Gas Co. is building a rig for No. 4 on the John Slider farm. Jarvis and Ayers have started drilling on their own farm, formerly the T. E. Powell, and are shut down cementing a cave on the Roanna Robinson farm. F. F. McIntosh is down 1,662 feet on the E. L. Hays farm. In Washington district, the Litten Gas Co. has started drilling on the Rubanna J. Jarvis farm. Kenny and Phillips have rigged up on the S. A. Carpenter farm. On Coal Fork in Sheridan district, W. F. Bickerstaff and others are down 1,600 feet in No. 5 on the William Cooper farm. In the same district Richter Oil Co. has started drilling No. 8 on the B. S. Raybush farm.

In Kanawha County Lincoln Gas Co. has started drilling No. 6 on the Fred J. Thabet farm in Elk district. In this district the second Oriskany test is drilling at 1,427 feet on the Copen heirs farm. In Cabin Creek district, Godfrey L. Cabot, Inc., has reached 1,345 feet in No. 47 on the A. D. Huntington farm and 1,027 feet in No. 48.

In Mason County, D. E. Newton has started drilling on the D. E. Newton farm on the Ohio River in Graham district about 100 feet north of the mouth of Sliding Hill Creek.

In Marion County Maxon Oil & Gas

(Continued on Page 61)

Ohio County, Ky., Leads Activities in Central West With 13 Completions

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Nov. 5.—Comparatively few completions were reported in the various fields comprising the Central West during the past week, with Central Ohio and Kentucky fields leading in activity. In the old Lima Field of Northwestern Ohio, but one well was brought in. It was Reese and others' No. 1 on the Nellie Ritter farm, Section 29, Tymochtee Township, Wyandot County. It shows for a light gas well at a depth of 1,380 feet. Newcomer and others are drilling a test on the L. F. Bogard farm, Section 4, same township. Wood and others are drilling No. 2 Edward Orton farm, Section 22, Crane Township.

In the Tiffin Field, in Seneca County, two wells are drilling, R. E. Greene's No. 3 T. C. and B. G. Shaull farm, Section 30, Liberty Township, and J. L. Barrett's No. 1 T. N. Einsel farm, Section 1, Hopewell Township.

In Auglaize County, Louis Zimmerman is drilling a test on his own farm, Section 27, Salem Township. C. Wentzer is drilling a test on his own farm, Section 28, Douchoquet Township.

In Hardin County, the Kenova Oil Co. is drilling No. 1 G. Schinderwolf farm, Section 25, Cessna Township, and the Kenton Oil & Gas Co. has a rig up for a test on the Ella Drenchel farm, Section 8, Pleasants Township.

In Van Wert County, Elmer Caudill and others are drilling No. 3 on the Mary Sheets farm, Section 30, Jackson Township. No. 4, same farm, is drilling, and the Hystanton Oil & Gas Co. is drilling No. 2 J. A. Reed farm, Section 30.

CENTRAL OHIO

Seventeen completions were reported from the Central Ohio Field, of which three were oil producers with an initial of 57 bbls., two dry holes and 12 gas wells.

In Athens County, Nuzum and others' No. 1 John Smith farm, Fractional Section 34, Carthage Township, is a dry hole at 915 feet. Clyde Cody's No. 2 L. A. Ruth heirs is a gas well in Section 36, Lodi Township at 803 feet. Stewart & Ross are drilling No. 3 on the Grace A. Blackwood farm, Section 7, same township. In Palmer Township,

(Continued on Page 66)

California Allotments Being Made on New Basis; Santa Barbara Mesa Gets 10,000-Bbl. Well

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Nov. 5.—A few minor changes in the method of allocating district quotas were authorized by the Central Committee of California Oil Producers last week and as a consequence the November allotments have been made on the new basis. In the future, fields will be penalized for overproduction by having the excess subtracted from the allowable for the next month. In authorizing this action, the Central Committee unanimously approved a report submitted by a special subcommittee that "the effect of excess production or hot oil on the indicated market demand of a district should be properly discounted or otherwise the hot oil or demand is compounded favorably to the future quotas of the district producing or utilizing such oil whether from storage or from current production."

New wells will be given a 30-day period following completion to tame down. New wells will continue the customary five-day flow test upon which the umpire will assign the well an allowable for 30 days. Heretofore, it has been customary for new wells to receive an allotment for the days remaining in the month in which the well was completed. This has caused considerable trouble because the schedules for the next month were many times already compiled or being calculated while new wells were making their regular five-day flow tests. To eliminate last-minute changes, new wells will be given an allowable for the 30-day period. This will give the umpire time to incorporate the new wells in the next schedule.

New Allowable

California's increased allowable for November has resulted in an increase of 5,227 bbls. in the daily allotment of Los Angeles basin fields; 2,625 bbls. per day for the Coastal fields and 1,800 bbls. for San Joaquin Valley fields. During November Los Angeles Basin fields will be permitted to produce 223,375 bbls. per day; Coastal fields, 48,125 bbls. per day and fields in the San Joaquin Basin 190,500 bbls. per day. The total of the three districts, 462,000 bbls., represents the state's new allowable for the month. Production for several months has been in excess of the prescribed allowable but the overage has not been unduly excessive or enough to seriously disturb marketing conditions.

The umpire sat down with operators in the Mountain View Field last week to iron out some of the kinks that have prevented this field from conforming with curtailment during the past two months. The excess accumulated will be absorbed by an underproduction spread out over several months. A few weeks ago, a number of operators in the Mountain View Field were all set to let the lid blow off to bring the matter to the attention of the industry. One of the largest operators, as far as production is concerned, had been overlooking curtailment and consequently was producing practically to the limit. Other operators who have been conforming with curtailment demanded an immediate compliance or they would forget curtailment. Fortunately, the matter has been adjusted and this field should now be in line.

Mountain View

Drilling operations in the Mountain View Field are holding up in good shape and preparations are under way to begin drilling several wells. There were no new wells chalked up in this field during the week but a number are scheduled for completion within 10 days, including Allen Brown's No. 1 Wells; No. 2 Nance of the A. T. Jergins Trust; No. 2 Nichols, No. 3 Ranton and No. 1 Wible of the Standard, and possibly No. 3 Smith of the Texas Co. New wells are being started by Barnsdall, Gilmore-Snyder Oil Co., Hogan Petroleum, Mohawk Oil Co., Union Oil Co., Wood-Callahan Oil Co. and Texas Co.

Development work in the Edison Field, east and a little south of Mountain View, is also showing a consistent increase and additional drilling will be undertaken. Lee Oil Co. is making preparations to complete No. 1-5 Seale in Section 5-30-29, which should be tanking oil within 10 days. Gilco, Inc., is also expected to list a new well for completion as its No. 2 Stuart-Gerard is standing cemented on top of the pay. Shell Oil Co. cleaned out No. 1 Cauley in Section 16-30-29 to 3,980 feet and cemented a 6⅝-inch water string at 3,935 feet preparatory to test.

Greenfield

J. B. Mitchell has blocked several thousand acres of potential oil land a few miles southwest of the Mountain View Field and preparations are under way to begin drilling. A total of 6,500 acres is involved and a substantial block has been assigned to the Seacliff Oil Co. in consideration that it will drill a thorough test immediately. This new play is in the Greenfield district about 10 miles south of Bakersfield and approximately 6 miles southwest of the Mountain View Field. The Greenfield area looks rather promising and although the area has been tested by several shallow wells the acreage involved can be considered as virgin territory because none of the several wildcats was close enough to have any effect on the new leases.

The 6,500 acres of leases blocked up by J. B. Mitchell include a number of relatively small tracts although there are a few large farms. Leases recorded indicate Mitchell has tied up property held by L. A. Fuller, N. Banducci, H. Rodriguez, S. Escano, R. L. Hosking, Mary A. Wellman, G. B. Weaver, John Machado, Felice Loustalot, C. D. Morris, Christine Ashe, Elizabeth Knapp, B. F. Strickler, Harry Hosking, Dan Burke, Robert B. McGee, S. Curnow, Bernard Uhalt, J. E. Mills, John Sandrina, A. T. Thirber, B. J. Curnow, Marianne Bidart, R. E. Ross, C. R. Wells, Verna Taylor, John V. Coulart, C. E. Womac, I. M. Belcher, J. J. Fontes, Grace Grimaud, Marie Andre, Jane Hall, Mansion O. Hall, Edward Lieb, W. E. Lieb, Peter Heguy, M. F. Imhoff, Josie Lieb, Vincent Garrone, Fanny Pouray, W. A. Williams, Manuel L. Goulart, J. Chevalier, Joseph Eyraud, Tony Caton, W. E. Mayhew, F. E. Eyraud, Mike Giminaiani, J. P. Kieffer, V. H. Daries, E. Sousa, M. P. Hermitte, Gotlieb Muller, R. P. Borel, Frank Sikola, M. J. Bernard, A. T. DeKay, Peter Gilli, Joe Costa, J. P. Depianti, M. Nicholas, D. Sandrini, M. S. Lima, P. R. McCaffrey and A. L. Nevis.

Mount Poso

Three wells were finished in the Mount Poso Field of Kern County by Shell Oil Co., which will probably have two more on production within a few days. No. 9 Vedder, bottomed at 1,769 feet but plugged back to 1,750 feet showed an initial daily production of 434 bbls. on the beam. No. 13 Vedder, finished at 1,838 feet but plugged back to 1,815 feet, was completed pumping 1,224 bbls. of 16.6 gravity per day and was the best listed. No. 10 Vedder was given a preliminary production test early in October but did not come up to expectations and was subjected to further work. It was listed for completion early in the week pumping 755 bbls. of 16.4 gravity per day from 1,832 feet. In addition to Shell, D. T. Turner and Union Oil Co. are expected to finish wells within a few days as each has a potential producer in the pay.

Honolulu Oil Corp. is starting several wells in the Midway-Sunset Field of Kern County and barring the development of mechanical trouble should finish No. 3 in Section 14-32-24 within a fortnight. J. K. Porter, who took over the Lakeview property in Section 25-12-24 a few months ago, has started preparations to drill another well on the property within 10 days. A new rig has been completed and rotary drilling equipment will be moved in. Standard Oil Co, which holds several hundred acres adjacent to properties now being developed by Honolulu, is maintaining a steady rate of drilling. Western Gulf Oil Co., with two wells under way and another being rigged up, is expected to finish the two drillers in the Fruitvale Field within 10 days. Standard has about completed preparations to begin drilling on its wildcat in the Semi-Tropic district of Kern County. Rex Oil Co. has completed No. 1 Mabry out in the Kern Front in Section 4-28-27, but it pumped only 74 bbls. per day upon completion at 2,693 feet after the hole had been plugged back from 2,740 feet.

Montebello

Universal Consolidated Oil Co. has decided to make another endeavor in the Montebello Field. Operators have been trying to prove the deep Cruz zone west of the Universal's discovery in the extreme eastern end of the field but work has proven exceedingly unfavorable. Universal has now decided to move east and will drill a new test farther out on the structure in the hope that there might be a small extension east of present production. The most easterly well in the deep zone is the highest structurally and contours predicated on the top of the Miocene indicate the high point is east of present production. The Miocene contours overlap the contours of the upper zone in the eastern end of the field and run in the opposite direction.

Universal has drilled three wells in the eastern end of the Montebello Field but has finished only the discovery well, which is doing about 100 bbls. per day from 7,010 feet. West of this well and located more favorably with respect to structure, Standard Oil Co. is drilling in No. 75 Baldwin at 8,107 feet but has failed to log even a good showing. The Fullerton Oil Co. has finished one well good for about 204 bbls. per day and St. Helens Petroleum got 110 bbls. upon completing No. 6 P. & B. at 7,038 feet.

Playa Del Rey

Continental Oil Co.'s plan to drill a wildcat southeast of the Playa Del Rey Field of Los Angeles Basin received a severe setback a few days ago when the Los Angeles city council refused to instruct the city attorney to prepare the necessary papers which would rezone the area. Considerable opposition has arisen due to the proximity of the acreage to the beach and this barrier may prove insurmountable. In the older section of the Playa Del Rey Field, Ohio Oil Co. finished No. 15 Recreation on a compressor at 3,793 feet after the hole had been plugged back from 4,080 feet and while the initial, 450 bbls. per day, was satisfactory the company has pulled the tubing to set a packer. Union Oil Co. is making good progress with No. 7 Del Rey, a recent spud which should be completed within six weeks as it is scheduled to be finished in the upper zone.

There were a number of wells put on production tests in the Long Beach Field this week but the initial production was rather small. Apex Petroleum Corp. put

---

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Oct. 21		Oct. 14			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Fuel oil	.....	.....	169,651	24,236	10,670,184	2,093,054
Diesel and gas oil	.....	.....	.....	.....	1,098,288	1,200,559
Gasoline	213,042	29,006	189,156	27,022	6,351,401	8,938,767
Kerosene	79,864	11,409	.....	.....	878,317	666,984
Asphalt	.....	.....	.....	.....	70,019	12,179
Other finished oil	.....	.....	.....	.....	54,778	90,557
Other unfinished oil	.....	.....	.....	.....	.....	72,584
Foreign exports—						
Crude oil	2,616	374	113,015	16,159	6,280,197	6,057,623
Fuel oil	86,258	12,323	485,136	69,305	10,529,024	6,479,038
Diesel and gas oil	21,837	3,120	39,571	5,653	3,253,842	2,794,163
Gasoline	130,350	18,621	235,263	33,609	3,723,359	4,669,820
Kerosene	15,339	2,191	87,444	12,492	1,461,730	1,581,984
Other finished oil	.....	.....	.....	.....	37,955	12,086
Other unfinished oil	.....	.....	.....	.....	224,275	66,375
Coastwise-domestic—						
Crude oil	.....	.....	480,966	68,709	6,934,565	5,827,511
Fuel oil	328,095	46,871	107,326	15,332	7,841,420	8,456,240
Diesel and gas oil	4,669	667	18,613	2,659	887,769	898,629
Gasoline	385,089	55,013	399,284	57,041	10,623,933	10,345,773
Kerosene	.....	.....	8,084	1,155	124,330	158,663
Naphtha distillates	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	110,650	.....
Diesel and gas oil	.....	.....	.....	.....	526,288	511,897
Gasoline	74,458	10,637	.....	.....	365,283	804,548
Kerosene	.....	.....	.....	.....	276,412	482,430
Lubricants	11,998	1,714	.....	.....	46,693	33,934
Foreign exports—						
Crude oil	38,304	5,472	.....	.....	1,601,165	1,542,286
Fuel oil	83,079	11,868	16,101	2,300	1,722,052	1,618,239
Diesel and gas oil	16,154	2,308	.....	.....	1,164,102	907,646
Gasoline	184,333	26,333	.....	.....	3,596,037	3,382,787
Kerosene	128,394	18,342	.....	.....	1,804,660	541,325
Lubricants	17,811	2,544	.....	.....	180,968	102,723
Other finished oil	.....	.....	.....	.....	2,760	2,746
Other unfinished oil	.....	.....	.....	.....	5,750	26,278
Coastwise-domestic—						
Fuel oil	.....	.....	64,340	9,263	4,392,562	2,958,067
Diesel and gas oil	.....	.....	.....	.....	119,036	189,323
Gasoline	140,539	20,077	59,543	8,506	4,413,943	3,378,427
Kerosene	2,937	427	3,819	546	77,442	95,204

two wells on production although only one was a new well. This was No. 1 Stratton, brought in pumping 71 bbls. of 28.1 gravity from 5,085 feet. No. 2 Brayton, the other well finished by the Apex, was a clean-out job. It was returned to production pumping 98 bbls. of 28.5 gravity per day from 5,019 feet. Dav-Mar Drilling Co. completed No. 1 Signal at 4,880 feet and brought it in doing 188 bbls. of 28.3 gravity per day on the beam. Hil-Mar Drilling Co.'s No. 1 Long Beach, bottomed at 4,680 feet and finished with a 4¾-inch liner including 130 feet of perforated was brought in pumping 161 bbls. per day. P. A. Kingsland's No. 7 was completed at 3,925 feet and finished pumping 124 bbls. of relatively clean 27.5 gravity per day.

Dominguez

Shell Oil Co. put two wells on production in the Dominguez Field but one was a clean-out job. This work resulted in recompletion of No. 1 Reyes, returned to production doing 140 bbls. of 26.8 gravity per day after the hole had been plugged back from 4,365 feet to 4,350 feet. No. 59 Reyes, a new well, showed substantial production upon completion at 4,787 feet after the hole had been finished with a 6⅝-inch liner carrying 148 feet of perforated as it came in under a natural flow doing 615 bbls. of relatively clean 28.1 gravity and 277,000 feet of gas per day. The cut seems to be increasing and at the present rate will require further work. It appears likely several additional new wells will be finished in this field during the next fortnight as both Union and Shell have a number of potential producers nearing completion.

The most important well under way in the Dominguez Field is No. 31 Hellman which may determine whether this field has another deeper productive zone. The test has been cemented at 7,393 feet and should be given a production test within 10 days. Standard is washing out the perforations in No. 116 Coyote in the West Coyote Field of Los Angeles Basin preparatory to making a production test and should be tanking oil within a week. In the Santa Fe Springs Field, General Petroleum recompleted No. 24 Santa Fe pumping 96 bbls. of 24.9 gravity per day after cleaning out the hole to bottom, 4,721 feet. Union Oil Co. has started grading location for 2 wells in this field.

Santa Barbara

Another new well was added in the Santa Barbara Mesa Field when Beloil Corp.'s No. 2 Martin was brought in doing 349 bbls. of 17.4 gravity per day following completion at 2,020 feet. The production was somewhat below previous completions. Aside from the probable completion of several new wells during the next 10 days, the most important development is the work being started by Rio Grande Oil Co. Preparations are being rushed to drill two new wells on the Perkins lease which the company acquired a few weeks ago. The other projected test on the Perkins lease will be started soon as a new rig is completed. This is the first work started in this field by any of the larger operators since the fiasco a few years ago when nearly every large company got severely burned before pulling out because of the limited quantity of oil sand present.

Union Oil Co. has material on ground for No. 1 Enos, a new wildcat in the Santa Maria district. This is the third test in this section by Union as the first test on the Rice property proved a dud. The second test was on the Moretti property and was good for about 50 bbls. of heavy oil per day on the beam from 2,389 feet. It is likely No.1 Enos, due to knowledge gained from the drilling of two other holes, will show up much better.

Ventura Avenue

Within a few weeks Property Service Corp. should be in a position to make a production test on its No. 3 Dabney-Lloyd in the extreme eastern part of the Ventura Avenue Field. This well looks exceedingly promising. It is the present intention to drill for another few hundred feet before making a production test although the 100 feet of oil sand already opened up is ample to justify expectation of getting production. It will not open a new field but will extend the eastern limits of the Ventura Avenue Field. Deep drilling in the old section is not proving as successful as anticipated due to fishing jobs.

In the Goleta gas field, Shell Oil Co. is rotating in Sespe at 4,600 feet, is not any too promising. The Sespe was picked up at 4,390 feet but so far has been barren. On the Chase & Bryce property in this field, Standard is going ahead at 4,850 feet although just as present redrilling at 3,485 feet. Signal Oil & Gas Co. has picked up the top of the Vaqueros oil sand in the Elwood Field of Santa Barbara County at 3,568 feet and may give this sand a test although it was started as a Sespe test. Shell and General Petroleum are both drilling their respective tests in the Capitan Field of Santa Barbara County but the latter may make a production test shortly. This field is of secondary importance from a program standpoint, although the low cost due to the shallow depth makes it desirable.

Kettleman Hills

Union Oil Co. has finished its seventh successful producer on the King lease in the Kettleman North Dome Field and this well, No. 6 King, was brought in flowing 5,547 bbls. of 37.1 gravity oil and 4,525,000 feet of gas per day from 8,360 feet after the hole had been finished with a 4¾-inch liner including 410 feet of perforated. No. 7 King was recompleted a week or two ago and now Union only has one more well to drill before completing the development program. No. 8 will be spudded within a week. Standard Oil Co. has staked a location in the Middle Dome of Kettleman Hills. Petroleum Securities has started making hole in No. 4 Felix in the North Dome but this project, which offsets No. 5 Whepley of the Associated, is a little behind the latter started a week or so ago.

Santa Barbara

The Santa Barbara Mesa Field got its first gusher a few days ago when the Fairacres Oil Co.'s No. 1 blew in out of control and painted the landscape for several miles around in addition to ruining several acres of winter vegetables for the Christmas market and transforming several white stucco residences into a different color. It blew in without warning while tubing was being run in preparatory to making a production test from a depth of 2,003 feet. It was running wild for 12 hours and conservative estimates indicate it was flowing at the rate of 10,000 bbls. per day before it sanded up. Rio Grande Oil Co., which has started drilling on the Perkins ranch, threw up several embankments and fortunately prevented the deluge from running down into the ocean.

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.	T.	R.	Depth	Status—
General Pet. Co., No. 11 Capitan, Santa Barbara Co.	32-	5-	30	2,692	sd. sh. drlg.
Shell Oil Co., No. 2 Capitan, Santa Barbara Co.	32-	5-	30	2,243	gr. sd. drlg.
Royalty Ser. Corp., No. 1 Los Alamos, Santa Barbara Co.	35-	9-	32	3,696	hd. sh. drlg.
Union Oil Co., No. 3 Santa Maria, Santa Barbara Co.	35-	10-	34	....	material
Signal Oil & Gas Co., No. 1 Elwood, Santa Barbara Co.	tideland			3,601	sd. sh. drlg.
Barnsdall-Rio Grande, No. 8 Doty Elwood, Santa Barb. Co.	15-	4-	29	5,732	redrlg. 1,782
East Elwood Pet. Co., No. 1 Elwood, Santa Barbara Co.	14-	4-	29	3,656	suspended
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20-	4-	28	4,602	rd. sd. drlg.
Standard Oil Co., No. 2 Goleta, Santa Barbara Co.	17-	4-	28	4,850	redrlg. 3,490
Ortega Oil Co., No. 1 Summerland, Santa Barbara Co.	16-	4-	26	4,242	rd. sh. drlg.
Woodrow Pet., No. 1 Rincon, Ventura Co.	4-	3-	24	7,612	suspended
Continental, No. 3 San Miguelito, Ventura Co.	23-	3-	24	7,015	fishing D. P.
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22-	3-	20	7,370	fishing
Fisher, Daniel, No. 1 South Mountain, Ventura Co.	5-	3-	19	641	sd. sh. drlg.
The Texas Co., No. 128 South Mountain, Ventura Co.	4-	3-	19	4,330	rd. sh. drlg.
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1-	4-	19	1,380	cleaning out
Bolsa Chica Oil Co., No. 2 Piru, Ventura Co.	4-	4-	18	614	sd. sh. drlg.
Piru Oil Co., No. 1 Piru, Ventura Co.	14-	4-	18	1,796	hd. sh. drlg.
American Drilling Co., No. 1 Simi, Ventura Co.	6-	2-	17	903	suspended
Dawson Oil Co., No. 1 Simi, Ventura Co.	5-	2-	17	1,795	hd. sh. drlg.
Rancho Oil, Inc., No. 1 Ojai, Ventura Co.	18-	4-	23	2,351	hd. sd. drlg.
Continental Oil Co., No. 1 Ojai, Ventura Co.	12-	4-	23	416	sd. sh. drlg.
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24-	3-	23	6,970	O. S. drlg.
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22-	4-	21	2,300	reaming
Casa Mira Oil Co., No. 1 Beiridge, Kern Co.	29-	28-	20	6,401	hd. sh. drlg.
General Pet., No. 1 South Beiridge, Kern Co.	30-	28-	21	11,377	suspended
Union Oil Co., No. 18 North Beiridge, Kern Co.	36-	27-	20	8,523	fishing D.P.
Standard Oil Co., No. 1-A North Beiridge, Kern Co.	36-	27-	20	3,363	sd. sh. drlg.
Amerada Pet., No. 1 Blackwells Corner, Kern Co.	17-	26-	19	2,723	plug 2,620
Home Corp., No. 1 McFarland, Kern Co.	16-	26-	27	2,102	suspended
Ohio Oil Co., No. 1 McVan, Kern Co.	22-	27-	27	1,364	bailing
Pell Oil Co., No. 1 McVan, Kern Co.	14-	27-	27	889	sd. sh. drlg.
Buckeye Union Oil Co., No. 1 McVan, Kern Co.	11-	27-	27	718	sd. sh. drlg.
Hancock Oil Co., No. 1 Mountain View, Kern Co.	14-	30-	28	3,885	sd. sh. drlg.
Associated Oil Co., No. 1 Mountain View, Kern Co.	3-	31-	29	2,437	sd. sh. drlg.
Associated Oil Co., No. 2 Mountain View, Kern Co.	14-	30-	28	1,269	sd. sh. drlg.
Union Oil Co., No. 3 Mountain View, Kern Co.	23-	30-	28	5,096	sd. sh. drlg.
Union Oil Co., No. 4 Mountain View, Kern Co.	15-	30-	28	3,821	sd. sh. drlg.
Union Oil Co., No. 5 Mountain View, Kern Co.	9-	30-	28	....	location
The Texas Co., No. 3 Mountain View, Kern Co.	14-	30-	27	5,252	sd. sh. drlg.
Barnsdall, No. 3 Mountain View, Kern Co.	31-	30-	29	3,490	sd. sh. drlg.
Hogan Pet., No. 6 Mountain View, Kern Co.	4-	31-	29	....	grading
Hoyt, Otis, No. 2 Mountain View, Kern Co.	19-	30-	29	....	grade
Standard Oil Co., No. 3 Mountain View, Kern Co.	23-	30-	28	5,479	sd. sh. drlg.
National Oil Co., No. 1 Mountain View, Kern Co.	30-	30-	29	5,604	suspended
Gilmore-Snyder Oil Co., No. 2 Mountain View, Kern Co.	24-	30-	28	rig	rigging up
Gilco, Inc., No. 2 Edison, Kern Co.	23-	30-	29	2,039	cemented
Jergins Trust, No. 2 Edison, Kern Co.	14-	30-	29	2,704	plug 1,560
Jergins Trust, No. 3 Edison, Kern Co.	14-	30-	29	rig	suspended
Jergins Trust, No. 4 Edison, Kern Co.	24-	30-	29	rig	rigging up
Shell Oil Co., No. 1 Edison, Kern Co.	16-	30-	29	4,276	cemented
Monterey Expl. Co., No. 7 Edison, Kern Co.	15-	30-	29	....	location
Centralia Oil Co., No. 2 Edison, Kern Co.	26-	30-	29	rig	suspended
North American, No. 1 Edison, Kern Co.	14-	30-	29	rig	suspended
General Pet., No. 1 Edison, Kern Co.	14-	30-	29	1,106	sd. sh. drlg.
General Pet., No. 2 Edison, Kern Co.	15-	30-	29	rig	suspended
Lee Oil Co., No. 1 Edison, Kern Co.	6-	30-	29	4,067	reaming
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-	32-	29	1,250	suspended
Standard Oil Co., No. 1 Semi-Tropic, Kern Co.	8-	27-	23	rig	rigging up
101 Oil Co., No. 1 Elk Hills, Kern Co.	5-	30-	24	rig	rigged up
The Texas Co., No. 1 Temblor, Kern Co.	29-	29-	21	....	location
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-	11-	19	6,258	redrlg.
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	28-	12-	11	4,438	suspended
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-	12-	11	6,138	suspended
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-	21-	16	10,944	redrlg. 8,129
K. N. D. A., No. 56 Kettleman, Kings Co.	8-	22-	18	10,154	redrlg. 9,410
The Texas Co., No. 1 Coalinga, Fresno Co.	35-	20-	14	....	port. rig
Western Gulf, No. 2 S. P., Fresno Co.	11-	17-	15	6,700	fishing D. P.
Farrell Pet., well No. 1, San Luis Obispo Co.	18-	31-	12	1,256	hd. sh. drlg.
Commonwealth Consd. Gas Co., No. 1 Tulare Lake, Kings Co.	21-	22-	20	2,490	gas, shut in
Commonwealth Consd. Gas Co., No. 3 Tulare Lake, Kings Co.	21-	22-	20	rig	suspended
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-	23-	16	812	sd. sh. drlg.
Trico Oil & Gas Co., No. 1 Alpaugh, Kings Co.	33-	24-	22	3,712	suspended
Trico Oil & Gas Co., No. 2 Alpaugh, Kings Co.	3-	25-	23	2,480	cmtd. 2,422
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-	16-	1	5,615	hd. sh. drlg.
Milham Exploration Co., No. 2 Tracy, San Joaquin Co.	24-	3-	4	2,254	sd. sh. drlg.
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-	10-	14	8,825	form. test.
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-	24-	3	1,812	hd. sh. drlg.
The Texas Co., No. 1 Petrolia, Humboldt Co.	1-	3-	2	....	location

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.	T.	R.	Depth	Status—
Clayton, G. L., No. 1 Cerritos, Los Angeles Co.	31-	3-12		6,598	fishing D. P.
Kelly & Son, No. 1 Torrance, Los Angeles Co.	7-	4-13		6,433	redrlg. 6,230
Houser, G. W., No. 1 Athens, Los Angeles Co.	18-	3-14		4,037	cleaning out
Wilshire Oil Co., No. 2 Potrero Deep, Los Angeles Co.	27-	2-14		7,985	fishing D. P.
Fourl, C. W., No. 1 Del Rey, Los Angeles Co.	27-	2-15		6,418	sd. sh. drlg.
Big Ben Oil Co., No. 1 Del Rey, Los Angeles Co.	27-	2-15		....	foundation
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24-	3-15		4,660	br. sh. drlg.
Standard Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6-	2-11		8,110	gr. sd. drlg.
Universal Consd., No. 4 Montebello Deep, Los Angeles Co.	6-	2-11		....	material
Shively, N. O., No. 1 Puente Hills, Los Angeles Co.	23-	2-10		rig	rigging up
Deep Rock Oil Co., No. 1 Puente Hills, Los Angeles Co.	23-	2-10		2,540	plug 2,524
Pressel & Tull, No. 1 Puente Hills, Los Angeles Co.	30-	2- 9		3,821	br. sh. drlg.
Barstow Oil Co., No. 2 Saugus, Los Angeles Co.	35-	5-16		2,400	suspended
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34-	5-16		3,358	fishing
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland			4,021	suspended
Explorers Drilling Co., No. 1 Fairview, Orange Co.	9-	6-10		945	cleaning out
Nuoil Co., No. 1 Newport, Orange Co.	29-	6-10		6,485	fishing D. P.
B. & B. Oil Co., No. 1 Newport, Orange Co.	19-	6-10		212	sd. drlg.
Platt & Collins, No. 1 Costa Mesa, Orange Co.	14-	6-10		3,566	suspended
Mid-Rich Drilling Co., No. 1 Atwood, Orange Co.	26-	3- 9		4,019	cleaning out
Bridger, J., No. 1 Coyote, Orange Co.	15-	3-10		5,410	suspended
Great American Pet. Co., No. 2 East Coyote, Orange Co.	19-	3- 9		1,046	sd. sh. drlg.
Great American Pet. Co., No. 1 Chino, San Bernardino Co.	18-	2- 8		2,462	suspended
Great American Pet. Co., No. 2 Chino, San Bernardino Co.	18-	2- 8		3,152	suspended
Great American Pet. Co., No. 3 Chino, San Bernardino Co.	7-	2- 8		200	suspended
Tehama Pet., No. 1 Santa Ana Canyon, San Bernardino Co.	33-	2- 8		2,720	plug 2,680
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	32-	18-	2	5,712	hd. sd. drlg.
Edmonds, E. A., No. 1 Trustee, San Diego Co.	29-	15-	3	2,208	hd. sd. drlg.
Everts Drlg. Co., No. 1 Camp Kearney, San Diego Co.	23-	15-	3	793	sd. sh. drlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36-	5-	5	105	sd. sh. drlg.

July Gasoline Consumption Shows Monthly Decrease

July consumption of gasoline in the United States showed a slight daily average decrease from the month preceding. The July total of 1,537,864,000 gallons represents a gain of 7.25 per cent over consumption for July, 1933. While the yearly comparison indicates better market conditions in 1934, the decrease from June consumption is decidedly unseasonal.

The figures represent a breakup as nearly correct as possible to obtain it, by states, of the total demand in the United States, as calculated from Bureau of Mines monthly statistics.

GASOLINE CONSUMPTION
(Gallons)

	June, 1934	July, 1934
Alabama	12,908,000	13,273,000
Arizona	6,401,000	5,882,000
Arkansas	11,840,000	12,626,000
California	116,126,000	102,628,000
Colorado	14,042,000	17,445,000
Connecticut	25,056,000	26,008,000
Delaware	3,966,000	4,144,000
District of Columbia	8,907,000	9,139,000
Florida	17,390,000	17,058,000
Georgia	19,337,000	20,731,000
Idaho	6,176,000	7,012,000
Illinois	92,517,000	96,340,000
Indiana	40,031,000	42,109,000
Iowa	35,677,000	34,897,000
Kansas	41,773,000	37,573,000
Kentucky	16,236,000	16,778,000
Louisiana	14,684,000	15,250,000
Maine	12,416,000	13,964,000
Maryland	19,208,000	19,539,000
Massachusetts	57,758,000	58,904,000
Michigan	69,787,000	76,235,000
Minnesota	38,242,000	42,520,000
Mississippi	10,976,000	10,885,000
Missouri	42,421,000	44,292,000
Montana	8,393,000	9,580,000
Nebraska	20,623,000	21,036,000
Nevada	2,289,000	2,424,000
New Hampshire	7,317,000	8,231,000
New Jersey	63,569,000	71,716,000
New Mexico	5,024,000	5,244,000
New York	149,052,000	156,467,000
North Carolina	21,722,000	23,765,000
North Dakota	8,883,000	9,873,000
Ohio	83,836,000	86,913,000
Oklahoma	29,566,000	27,534,000
Oregon	16,567,000	15,833,000
Pennsylvania	103,936,000	104,740,000
Rhode Island	10,489,000	11,681,000
South Carolina	10,653,000	11,328,000
South Dakota	8,640,000	10,896,000
Tennessee	18,109,000	16,899,000
Texas	79,093,000	75,574,000
Utah	5,920,000	6,598,000
Vermont	5,060,000	5,522,000
Virginia	23,784,000	22,743,000
Washington	22,516,000	25,219,000
West Virginia	13,740,000	13,267,000
Wisconsin	38,612,000	42,339,000
Wyoming	4,095,000	5,050,000
Total	1,495,747,000	1,537,864,000
Daily average	49,858,000	49,609,000
Change from previous year:		
Total change		+102,948,000
Percentage change in daily average		+7.25%

New Well in Burrton Pool, Reno County, Kansas, Produces 5,460 Barrels in the First 24 Hours

By JAMES McINTYRE

The Burrton Pool in Reno County, Kansas, came through with another big well in the latter part of the week in review when the Olson Oil Co. and Shell Petroleum Co.'s No. 3 Goering, C SW SW SW Section 26-23-4w, produced 5,460 bbls. of oil in 24 hours from Misener sand at 3,568-88 feet, which had been given a 1,000-gallon acid treatment.

D. R. Lauck in his wildcat test, No. 1 Roy, NE NE SW Section 24-29-1w, Sedgwick County, about 10 miles south of Wichita, had a good showing of oil in chat at 3,364-68 feet, still drilling, and as the well was running high the owner was hopeful of good results with deeper drilling.

Estimated Production

Estimated daily average production of Kansas for the week ending November 3 and for the preceding week follows:

	Barrels	
	Nov. 3	Oct. 27
Hollow	5,250	5,695
Ritz-Canton	10,400	10,695
Voshell	5,450	5,390
Johnson	1,863	1,820
Sedgwick County	7,600	7,430
Nikkell	5,675	6,170
Ellsworth County	1,877	4,310
Barton County	1,205	1,315
Rice County	13,278	12,925
Reno County	8,230	8,175
Ellis County	225	440
Kingman County	1,552	1,290
Stafford County	2,275	1,160
Russell County	6,600	8,555
Greenwood County	11,250	11,500
Butler County	19,000	19,300
Other pools	18,145	18,585
Total	119,975	124,755

Reno County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Hilger B, SW SW NE Section 16-25-4w, Reno County, drilled Siliceous lime at 4,196-98 feet, finding a showing of water. The hole was plugged back to 4,065 feet. It had no production in any of the upper formations, but there was a showing of oil in Viola lime at 4,083-85 feet. Misener sand was topped at 4,055 feet.

Dustin, Hopper and others' No. 1 Evans, C NE NW Section 25-24-8w, which had been deepened from 3,539 feet to 3,552 feet and acidized, pumped 231 bbls. of oil and 10 bbls. of water in 24 hours and was recompleted.

Shell Petroleum Corp. completed No. 1 Ratzlaff, SE SW SE Section 2-23-4w. It pumped 620 bbls. of oil and 500 bbls. of water from Hunton lime at 3,607-09 feet which had been given an acid treatment.

Skelly Oil Co.'s No. 1 Sabin, NE NE NW Section 11-23-4w, was completed. It pumped 654 bbls. of oil and 299 bbls. of water in 24 hours from acidized Hunton lime at 3,565-3,609 feet.

Barnsdall Oil Co. and Indian Territory Illuminating Oil Co.'s No. 2 Baughman, SE NE NE Section 34-23-4w, had Hunton lime at 3,579-85 feet. It flowed 3,042 bbls. of oil naturally in 24 hours.

Lario Oil & Gas Co. and Reserve Petroleum Co. made a location for No. 1 Shepherd, NW NW SW Section 18-22-5w, a wildcat.

Olson Oil Co. and Shell Petroleum Corp.'s No. 1 Downie, SE SW NE Section 14-23-4w, found Hunton lime at 3,589-96 feet. The hole filled with oil in three hours.

Olson Oil Co. and Shell Petroleum Corp.'s No. 3 Goering, SW cor. Section 26-23-4w, flowed 1,056 bbls. the first eight hours from Hunton at 3,570-88 feet.

Harvey County

The Texas Co. completed No. 1 Andrees, SE NW SW Section 8-22-3w, an old well deepened from 3,205 feet to the Hunton lime at 3,442-75 feet, total depth 3,484 feet. It pumped 38 bbls. in 24 hours.

Barton County

Stanolind Oil & Gas Co. made a location for No. 1 Herter, C SE NW Section 9-20-11w, Barton County.

Cowley County

Lewis Production Co.'s No. 1 Sitton estate, SW NE NW Section 20-31-6, Cowley County, was dry and abandoned at 2,925 feet.

National Refining Co.'s No. 1 Robinson, NE SE NE Section 11-34-4, was dry and abandoned at 3,105 feet.

Ben Gralapp was building rig for No. 1 Kukuk, SW SW NW Section 6-33-4. Roth & Faurot made a location for No. 6 Holt, SW NW SE Section 12-32-4.

Elk County

Sagamore Oil & Gas Co. was building rig for No. 8 Plummer, NW NE SE Section 28-31-12.

Western Pipe & Supply Co.'s No. 7 Burford, C W half SE NE Section 28-31-12, plugged back from 1,561 feet to 1,250 feet and acidized in Oswego lime at 1,225-50 feet pumped and flowed 260 bbls. of oil and about 5 bbls. of water in 24 hours.

Butler County

F. G. Hall completed No. 2 Graves, NW SW NW Section 17-29-4, Butler County. It was twice acidized in Lansing lime at 1,820-70 feet. It first made 125 bbls. of oil and 75 bbls. of water but in a later test pumped 40 bbls. of oil and 25 bbls. of water.

Flint Hills Oil & Gas Co.'s No. 8 Martin, C N half S half NE Section 27-28-4, was completed as a gas well, with an initial production of 300,000 feet; total depth 1,499 feet.

Al Becker's No. 1-A Beedles, SW SE NE Section 8-27-6, was not completed, but it tested 50 bbls. a day after an acid treatment at 2,757-72 feet.

Garden and others' No. 1 Prenner B, NW cor. SW Section 32-24-4, is a 20-bbl. completion in chat at 2,675-2,721 feet, which had been acidized.

Sedgwick County

E. B. Shawver's No. 2 Brookings, NW SW SW Section 16-28-1e, Sedgwick County, had chat pay at 3,094-3,100 feet. It flowed 120 bbls. in 12 hours.

E. B. Shawver completed No. 2 Russell, SW SE SE Section 17-28-1e, chat pay at 3,088-3,120 feet. It was acidized and flowed a potential production of 564 bbls. in 24 hours. Shawver has a rig on the ground for No. 4 Russell NE SE SE Section 17-28-1e.

Dickey Oil Co.'s No. 1 Yaw, NE NW NE Section 20-28-1e, flowed 365 bbls. in 24 hours from pay at 3,081-3,119 feet, after having been acidized. It was not yet completed.

Fisher & Lauck had rig up for No. 11 Trustee, NE NE SE Section 19-27-2.

Shell Petroleum Corp. was rigging up No. 1 Neufeldt, SE SW NW Section 8-22-3w, to deepen it from 3,207 feet to a lower pay horizon.

O. J. Connell made a location for No. 1 Roth, SW cor. Section 16-22-2w, a wildcat test.

Derby Oil Co.'s No. 1 Billau, SW SE SW Section 5-22-1w, found Hunton lime at 3,306 feet and cored to 3,321 feet. The hole filled 2,000 feet with water topped by 300 feet of oil. It had not yet been tested.

Rice County

Empire Oil & Refining Co.'s No. 1 Specht, NE cor. Section 20-20-10w, Rice County, flowed 194 bbls. in 13 hours following an acid treatment in Kansas City lime at 3,101-04 feet.

Vickers Petroleum Co.'s No. 4 Binger, SW NW SE Section 21-20-10w, pumped 210 bbls. in seven hours from Siliceous lime at 3,335-40 feet which had been acidized.

Marathon Oil Co.'s No. 4 Proffitt, NW SW NW Section 5-20-9w, stood with 3,000 feet of oil in the hole from Siliceous lime at 3,276-81 feet. It had not been acidized.

Atlantic Oil Producing Co.'s No. 1 J. Schmidt, SE NW SE Section 11-19-10w, was abandoned at 3,025 feet. It had 500,000 feet of gas and some oil and water at 3,021-25 feet.

Sinclair Prairie Oil Co.'s No. 1 Volkland, NE SE SE Section 20-19-9w, found Siliceous lime at 3,204-25 feet. It swabbed 512 bbls. in 32 hours and was then acidized.

Phillips Petroleum Co.'s No. 1 Link, SW NW SW Section 21-19-9w, filled 3,000 feet with oil in three hours from Siliceous lime at 3,206-09 feet, but had not been tested.

Keith & Hall completed No. 1 Grove, SE SE NW Section 29-19-9w, an old well deepened from 2,985 feet to Siliceous lime at 3,235-41 feet. It pumped 729 bbls. in 19 hours.

Lario Oil & Gas Co. had rig up for No. 1 Schrag, NW SE SW Section 22-19-4w, a wildcat location. Continental Oil Co. and others had rig on the ground for No. 1-A Lansing, NE NE SW Section 25-18-8w. Ryan and others' No. 1 Gnagey, C SE NE Section 9-17-7, was drilling at 225 feet.

Carpenter & Wilhelm have rig up for No. 5 Rainet, SW SW SE Section 3-21-6w.

Torrey, Feaster and others' No. 1 Brown, NE NE NW Section 10-21-6w, pumped 598 bbls. of oil and 144 bbls. of water in a potential test and was completed. It produces from chat at 3,376-3,419 feet.

Rush County

Lario Oil & Gas Co. and Phillips Petroleum Co. have cellar dug for a wildcat test in Rush County, No. 1 Benbow, NW NE NE Section 12-17-19w.

McPherson County

Shell Petroleum Corp.'s No. 5 Koehn, SE NW NE Section 16-21-3w, swabbed 65 bbls. in nine hours from pay at 3,388-96 feet which had been given a 15-quart shot.

Continental Oil Co.'s No. 1 Goering, SE SE SW Section 29-21-1w, was acidized in Hunton lime at 3,279-3,300 feet and later made a potential production of 1,027 bbls. in 24 hours, and was completed. The company and others made a location for No. 1 Craber, SW SW SE Section 32-21-1w.

J. H. Miller, Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 5 Flock, NE NE NW Section 1-20-2w, pumped 254 bbls. of oil in 15½ hours from chat. It also made 3,000,000 feet of gas.

Shell Petroleum Corp.'s No. 3 Griffin B, NW NW NE Section 14-19-2w, was completed in Viola lime at 3,355-71 feet. It made a potential production of 654 bbls. in 24 hours.

Shell Petroleum Corp.'s No. 9 Meyers B, 1,320 feet from the west line and 330 feet from the south line of SE Section 14-19-2w, pumped 61 bbls. in 14 hours after an acid treatment in Viola lime at 3,361-75 feet.

T. J. Breslin had a rig up for No. 1

(Continued on Page 78)

Wildcat Operations in Kansas

Week Ending November 3

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Lario O. & G. Co.'s No. 1 Whelan, C NW Sec. 32-31-11w.
Chat 4,355-4,435 ft.; P.B. to 4,380 ft.; pumped 25 bbls. fluid per hr.; 10 to 20% wtr.

BARTON COUNTY

Murphin and Downing's No. 1 Lanterman, NW SE Sec. 15-19-11w.
Drlg. 1,958 ft.

C. L. Price et al's No. 1 Ehrlich, NW SE Sec. 10-16-13w.
T.D. 360 ft.; fishing.

Treleaven & Brimm et al's No. 1 Haas, SW cor. Sec. 30-18-15w.
Rigging up.

Walter Shearen et al's No. 1 Kempler, SE NE NE Sec. 31-18-11w.
S.D. 300 ft.

BUTLER COUNTY

Gaines et al's No. 1-A McKinley, NE SE Sec. 19-29-4.
K. C. lime at 1,890 ft.; T.D.; C.O.

Bill Rex et al's No. 1 DeMoss, NE NW Sec. 8-28-7.
Sand 2,665-95 ft.; shot with 80 qts.; pumped 60 bbls. of oil and 300 bbls. of wtr. in 12 hrs.

F. H. Unruh et al's No. 1-A Joseph, SE SW NW Sec. 13-25-4e.
Rig.

CHASE COUNTY

Strong City Gas Co.'s No. 1 Urschel, NW cor. SE NW Sec. 30-18-8.
Comp.; 500,000 ft. gas, 405 ft.

CLAY COUNTY

Seidel Bros.' No. 1 Youkers, C S½ SE NW Sec. 21-9-4.
S.D. 1,353 ft.

Severs et al's No. 1 Meyers, NE NW NW Sec. 4-10-4.
Mississippi lime 1,775 ft.; T.D. 1,834 ft.

COWLEY COUNTY

Ben Gralapp's No. 1 Kukuk, SW SW NW Sec. 6-33-4.
Bldg. rig.

National Refining Co.'s No. 1 Robinson, NE SE NE Section 11-34-4.
Dry and abd. 3,105 ft.

Otstot et al's No. 1 Eckhardt, SE NW Sec. 15-35-6.
Spudded and S.D.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
Set 8-in. csg. 2,500 ft.; S.D.

ELK COUNTY

Lassen's No. 1 Ferguson, SE SE SW Sec. 21-30-8.
Drlg. 500 ft.

ELLSWORTH COUNTY

Ainsworth Bros.' No. 1 Charvat, NE NW NE Sec. 33-15-10w.
Drlg. 1,810 ft.

Eldorado Ref. Co.'s No. 1 Stratman, SW SE SE Sec. 32-14-11w.
Drlg. 3,152 ft.

Lario Oil & Gas Co.'s No. 1 Harbalek, SW NW Sec. 7-16-10w.
Drlg. 2,400 ft.

GREENWOOD COUNTY

Greeley et al's No. 1 Satler, SW SE SW Sec. 28-25-12.
S.D. 335 ft.

Texas Co.'s No. 1 Edwards, NE NW NE Sec. 32-24-12.
Machine.

HARVEY COUNTY

O. J. Connell et al's No. 1 Roth, SW cor. Sec. 16-22-2w.
Location.

Imo O. & G. Co. et al's No. 1 Sperling, SE NE NE Sec. 23-22-2.
Set 15-in. pipe at 120 ft.; drlg. 285 ft.

Wensel et al's No. 1 Schrag, NW SE Sec. 24-22-3w.
T.D. 587 ft.; S.D. for csg.

McPHERSON COUNTY

C. W. Lamer et al's No. 1 Rolander, NE NE NW Sec. 8-18-2w.
Set 8-in. csg. 2,149 ft.; S.D. 2,160 ft.

Roth-Farout et al's No. 1 Bestwater, SE SW SE Sec. 23-20-1w.
Drlg. 1,100 ft.

(Continued on Page 78)

West Tuleta Field Extended Half Mile to West; First Oil Completion in the Caesar Field

—SAN ANTONIO, Tex., Nov. 5.—The most important development in the Southwest Texas district during the week took place in the West Tuleta Field, Bee County, where Mills Bennett Production Co.'s No. 1 Harris extended production one-half mile west, opening more acreage for development. Although no production gauge had been reported, the well was being put on production and its performance has indicated it as one of the best wells in the field. It is flowing through a one-quarter inch choke, and showing 900 pounds tubing pressure and 1,200 pounds casing pressure. It is bottomed at a total depth of 3,922 feet with the Pettus sand topped at 3,872 feet.

It is one-half mile west and 660 feet north of Blanco Oil and Buchanan's No. 1 Perez, the nearest well, which made largely gas. The completion calls for drilling three tests. Operators of the extension test made a deal during the week with Shell Petroleum Corp. for the Silcock 160-acre lease adjoining the Harris lease on the east and the company is now rigging up for its first well. It is in the southwest corner of the tract and is an east offset to the new producer. It is reported Trinity Drillers and Houston Oil Co. have made offset locations south and southwest.

While the test was being completed as a producer, another outpost test, 3 miles southwest of the field, was a failure. It is Dirk Brothers' No. 1 George Ray in the W. B. Branchard Survey. The Pettus sand was topped at 3,924 feet and on a drill stem test it showed considerable salt water and was abandoned at a total depth of 4,250 feet, contract depth.

Caesar Field

The Caesar Field, northwestern Bee County, got its first oil producer when Luling Oil & Gas Co.'s No. 4 Ruhman, in the William F. Hodges Survey, was completed for an initial production of 114 bbls. daily from sand topped at 3,054-62 feet. Gravity is 26 degrees. It is bottomed at a total depth of 3,062 feet and has a working pressure of 500 pounds and 600 pounds on the casing. Ten other tests in the field were completed as wet gassers.

Sam Fordyce Field

In the Sam Fordyce Field, southwestern Hidalgo County, interest is centered on Danvers and Harrison's No. 1 Francisco B. Guerra, an outpost 5,200 feet east of the discovery in Tract 12, Porcion 41, which is preparing to test a new 1,800-foot sand after it had showed oil sand in a core from 1,838-46 feet. This same sand was reported to have been encountered in the discovery well at 1,900 feet, but carried only gas.

Two other tests were coring for the Sam Fordyce sand, and another was expected to pick up the sand the first of the week. Heep Oil Corp.'s No. 1 Francisco B. Guerra, in the Heep 50 acres of the north 115 acres of Tract 254, Porcion 40, about 3,000 feet northeast of the discovery, is coring below 2,700 feet. This test would open a wide area for immediate and intensive drilling to the north, northeast and east. Kingwood Oil Co.-Porter Evans and others' No. 1 David Flores in Tract 262, Porcion 38, 2,000 feet west of the discovery, was ratholing below 2,770 feet and is expected to pick up the sand within 50 feet. One thousand feet west of the discovery, Edwards and Alford's No. 1 Eusebio Flores, in Tract 267, Porcion 38, is below 2,700 feet and is expected to start coring for the sand early in the week.

Heep Oil Corp.'s No. 1 W. R. Jackson, 4,000 feet southeast of the discovery, is drilling below 1,505 feet. Location is in Tract 278, Porcion 40. Kingwood Oil Co.'s No. 1 Guerra, in Tract 254, Porcion 39, about 1,700 feet north of the discovery, is fishing for the remainder of 120 feet of liner lost in the hole when the well ran wild last week after a gas blowout. Most of the liner was removed, and as soon as the rest is recovered operators will core deeper in an attempt to escape the high pressure gas formation.

A short distance east of the discovery, Moncrief and Showers' No. 1 John Lawrence has cemented 200 feet of surface casing and is waiting on cement to set. Lucky-Blocker and Bishop are preparing to start their second well, in Tract 254, Porcion 39, in the southeast 20 acres of the tract. Kingwood Oil Co. has derrick up for No. 2 Francisco B. Guerra, in Tract 254, Porcion 39, about 700 feet east of the company's No. 2 Guerra, a producer.

Five Wildcat Tests

In the same county another wildcat is preparing to get under way, making a total of five active in the county. The latest is T. I. Larson's No. 1 G. G. Salinas and others, in the southwest corner of Tract 10, Porcion 41, about 7,500 feet northeast of the Sam Fordyce discovery well. Machinery is being moved in and it is expected to spud during the week. The deep wildcat test of Union Sulphur Co., No. 2 American-Rio Grande Land & Irrigation Co., passed the 7,000-foot depth, and is drilling below 7,042 feet. It is in Tract 2,082, Block 86, North Capisallo district, and is the deepest hole ever drilled in the extreme South Texas district. A few miles northeast of Edinburg, McCollum Exploration Co.'s No. 1 John C. Engleman is drilling below 4,685 feet in red shale and sand. Location is in Lot 3, Block 70, Las Mestenas Grant Survey.

Goliad-Karnes

Development along the Jackson trend during the week proved disappointing. In northern Goliad County, near the town of Huisache, Jack Porter's No. 1 Meyer was reported a failure at 4,561 feet. Over the line in Karnes County, California Co.'s No. 1 J. C. Tom, Jr., in the Maria De Jesus Y, Barva grant, was drilling below 4,350 feet after it had showed nothing encouraging in the Pettus sand which was reported topped at around 4,214 feet.

Live Oak County

In the McNeil area, west of the Lucas Field, Live Oak County, Lion Oil & Refining Co.'s No. 2 McNeil, a short distance northeast of the discovery, is looking unfavorable after it failed to show anything of importance around the producing horizon of the discovery well. It is drilling below 5,480 feet. Location is in Block 9, in the James Curry Survey.

Guadalupe County

Along the Fault Zone area, in southern Guadalupe County, Diamond Half Oil Co.'s No. 1 Maierhorfer is shut down at 2,110 feet. The Georgetown lime was topped at 2,060 feet and it is reported to be running high enough to offer some promise of production when it encounters the Edwards lime expected within the next 100 feet. It is in the L. H. Peters Survey.

Frio County

In Frio County, the deep wildcat of Amerada Petroleum Corp., No. 2 Halff & Oppenheimer, 5 miles southwest of Pearsall in the J. H. Gibson Survey, is reported to be in soft sand at 9,885 feet but has not encountered any showings of oil or gas. For the past few weeks the test has been drilling in the Glenrose lime. This is the deepest test ever drilled in the district.

Caldwell County

Several new locations were made in Caldwell County. F. Meyers has made location for No. 1 Mooney, northwest of Luling. In the Dale Field, W. B. Hinton is moving in rig for No. 1 Osteen in the Swearingen Survey. Northeast of the Salt Flat Field, Fomax Oil Co. is rigging up for No. 1 Tiller, in the G. Hinds Survey. O. Dawn has made location for No. 1 Tiller, 250 feet from the north line and 1,000 feet from the east line of the Tiller 37-acre tract, G. Hinds Survey.

Gonzales County

Over the line in Gonzales County, Diamond Half Oil Co.'s No. 1 Kailles, a wildcat in the Ira Nash Survey, has been abandoned at 3,890 feet after it had encountered the Edwards lime at 3,880 feet which showed salt water.

Jim Wells County

In the Fremont Field, Jim Wells County, Sinclair Prairie Oil Co.'s No. 1 A. W. Selligson, B.S.&F. Survey, Section 71, completed in January as a gas well, blew out and caught fire while being deepened, and it is reported the hole is cratering. Sinclair Prairie Oil Co. purchased the well and considerable acreage from Trinity Drillers after they had completed it for a gas well and were drilling in sidetracked hole at 3,865 feet when the hole blew out. It is not known from which sand this gas is blowing, as 12 sands were encountered below 2,354 feet, where 7-inch casing was cemented.

Starr County

Several interesting wildcat tests are being drilled in Starr County. Weekly Oil Corp.'s No. 2 Starr County Cattle Co., Block 19, Jeffries-Lambeth Subdivision of Tract 60, Porcion 89, Ancient Juridiction of Camargo, is coring in sticky shale at 2,537 feet after coring sand from 2,515-2,527 feet. E. L. Younkins and others' No. 1 Kelsey-Bass, Block 19, B.&B. Oil Co.'s Subdivision of Porcion 87, Ancient Jurisdiction of Camargo, in the southern part of the county, is drilling below 2,135 feet. In the northeastern corner of the county, C. R. Borah's No. 1 Arcadio Guerra, Share 6, San Ramon grant, has reached an interesting depth. An oil show was encountered around 1,900 feet and the test is coring in sand below 2,200 feet.

Duval County

The Government Wells Field, Duval County, registered five producers during the week and got six new tests. Central Producers, Inc.'s No. 3 Luptack, in Survery No. 41, was completed for 12,000,000 feet of gas daily. Government Wells Oil Corp.'s No. 5 State, Survey No. 6, topped the sand from 2,179-2,222 and made 35 bbls. per hour. It is bottomed at 2,222 feet. Magnolia Petroleum Co.'s No. 14 Duval County Ranch Co. cemented 7-inch casing at 2,174 feet and was completed for 15,000,000 feet of gas and 20 bbls. of oil daily. Total depth is 2,174 feet. The company's No. 38 Duval County Ranch Co. made 10 bbls. per hour on a three-eighths inch choke from a total depth of 2,322 feet. Russ Petroleum Co.'s No. 2-C Hahl, in Survey No. 62, was completed for 75 bbls. per day at a total depth of 2,350 feet.

Wildcat Operations in Southwest Texas

Week Ending November 3

BANDERA COUNTY

A. P. Crane & Co.'s No. 1 Watson, 988 ft. NE line, 926 ft. SE line, Sec. 71, Antonio Carvier Sur.
T.D. 1,790 ft.

Plateau Oil Co.'s No. 1, Garrison Sur. No. 506, 1,500 ft. from N and 2,700 ft. from E lines of Sur. (8 mi. SW of Medina).
Drlg. 985 ft.

Muenrio Oil Co.'s No. 1 E. M. Pruitt, 2,418 ft. from NE line, 330 ft. from SE line of J. A. Navarro Sur.
Drlg. 560 ft.

BASTROP COUNTY

Champion et al's No. 1 Charles E. Anderson, Antonio Navarro Sur.
Standing 850 ft.

BEE COUNTY

R. M. Herod's No. 5 Kimball, 810 ft. from E line, 150 ft. from N line of 110-ac. tract in S. Winship Sur.
Derrick; digging wtr. well.

Bill Hindeman's No. 1 Imogene Hall, 2,310 ft. along NW line of S½ of H. W. Fontaine Sur., thence at R/A 1,362 ft.
Rig moved off.

Wm. F. Morgan et al's No. 1 Hicks & Hall Sec. 43 (Normanna area).
Drlg. 3,500 ft.

Tuleta Oil Co.'s No. 1 George Ray, 330 ft. from E line, midway between N and S lines of George Ray 203.7-ac. tract in Blanchard Sur., 3 miles SW of Tuleta Field.
T.D. 4,250 ft.; abd.

Humble O. & R. Co.'s No. 1 Daniel Fox, 1,500 ft. from N line, 3,270 ft. from E line of 1,584-ac. tract in M. Fox Sur.
Drlg. 4,720 ft.

Mid-Continent Cruc'e Oil Co.'s No. 3 Kimball (Grayburg area).
T.D. 250 ft.; S.D.

R. J. Worthington et al's No. 1 Rutledge, 1,000 ft. from N line and 200 ft. from E line of A. Hadley Sur.
T.D. 1,950 ft.; S.D.

BEXAR COUNTY

Lloyd Bender's No. 1 Evans, 1,300 ft. from W line, 200 ft. from N line of 312.7-ac. tract in de la Garza Sur.
Standing 979 ft.

F. T. Chew's No. 1 C. S. Ogden & Brooks, 50 ft. E line, 2,500 ft. from Mitchell Lake, on 1,500-ac. tract, Irrigated farms.
S.D. 250 ft.

Dr. Dickens' No. 1 Victor Gella, 150 ft. NW line and 150 ft. NE line of Cardines No. 25 Sur.
S.D. 530 ft.; set csg.

Jones & Kieffer's No. 1 LaGrana, NW cor. of tract, 210 ft. each way, F. Rolen Sur.
Moving on.

McFee & Briggs' No. 1 Lamb, 9,200 ft. from S line, 300 ft. W line, Manvel Deluna Sur. No. 3, Tract A. & B.
S.D. 1,065 ft.

Mecina Oil Co.'s No. 1 Hendricks, 700 ft. S line, 400 ft. W line of 108-ac. tract, County Blk. 491, C. A. Yoakum Sur. No. 39.
T.D. 1,050 ft.; abd.

R. Y. Walker's No. 1 L. A. Hamilton, 550 ft. SE and NW cor, 1,110 ft. NE of NW line of tract, Blk. 4,007.
Location.

BROOKS COUNTY

Cole Pet. Co.'s No. 1 Ulrich, 785 ft. E line, 1,333 ft. S line of C.C.S.D.&R.G.N.G. Sur. 7.
Standing 4,515 ft.; (contract depth).

Helmerich & Payne's No. 1 Scott and Hooper, Palo Alto y Guerra grant.
Location.

(Continued on Next Page)

NORTHEASTERN MEXICO

In northeastern Mexico, across the Rio Grande, three tests were drilling and a fourth had been abandoned. Compania De Petroleo "El Charos" No. 5-A Rio Bravo, about 23 miles west of Reynosa, Tamps, was drilling below 3,063 feet. Compania De Petroleo Mercedes, S. A., No. 1 Encantada, near the town of Ochoa, west of Reynosa, is reaming down to bottom at 1,458 feet. Ohio-Mex Oil Co.'s No. 2 Rancherias, 8 miles southwest of Rio Grande City, Tex., but in the Mexican area, has cemented 15-inch casing at 800 feet. Sixty miles southwest of Reynosa, Continental Oil Co. of

Mexico has abandoned its No. 3 Carlos Cantu at a total depth of 6,521 feet. Mexican-Gulf Production Corp.'s No. 1 San Ambrosio, 40 miles southwest of Nuevo Laredo, Tamps, is drilling below 6,667 feet in gray lime.

Eastern Fields

(Continued from Page 56)

Co. has reached 1,280 feet on the Ash heirs farm in Mannington district. The Pittsburgh Coal was at 1,015 feet. Monroe and Laughlin remain shut down at 650 feet in No. 3 on the A. D. Wells farm.

In Pleasants County, on Schultz Fork in Jefferson district, Dinsmoor & Co. have started drilling No. 12 on the J. R. Bills farm. In McKim district, Ward and others are starting No. 20 on the George Varner farm.

In Ritchie County, about 1,700 feet northwest of the Sada McGinnis farm, the present tip of the Injun sand streak in the Lost Run Pool, L. N. Rinehart is drilling on the A. J. Glass farm. In the Pike Pool, L. N. Rinehart has a rig completed to start a second test on the George Millbauer farm. C. B. Smith and G. B. Hendershot are drilling No. 2 on the C. W. Wilcox farm, and moving in rig timbers for No. 3, same farm. C. L. Donaldson and others have reached 900 feet on the J. P. Strickler farm.

In Murphy district, Ritchie County, on Hughes River, 1 mile south of Smithville on State Route 47, W. H. Bickle has a rig on the I. R. Hardman farm. On Leatherbark Creek, L. P. Bickle is drilling No. 3 on the Morris Brothers farm.

In Roane County, W. B. Heeter and others have rigged up on the W. B. Heeter farm in Curtis district, about 950 feet southeast of the producer on the Maude Knopp farm. In this district K. M. Hunt and others have rigged up on the W. R. Miller farm about 1,800 feet east of the E. S. Ball No. 1.

In Wood County, Lemley Farm Oil Co. is moving in machine for a second test on the Sarah Lemley farm at Pleasant Hill in Walker district. J. B. Yeager and others have spudded on the W. B. Wamsley farm.

SOUTHWEST PENNSYLVANIA

There were no completions in Southwest Pennsylvania during the week. In Amwell Township, Washington County, Carnegie Natural Gas Co. is hauling the tools to location for No. 2 M. C. Manon. On the R. M. Carrons farm, this company is completing the rig for a test. Manufacturers Light & Heat Co. has reached 2,200 feet on the R. A. Rankin farm.

In Franklin Township, Carnegie Natural Gas Co. in drilling deeper No. 1 on the S. A. Dague farm reached the top of the Gordon Stray sand at 2,822 feet with oil, gas and water showing at 2,857 feet. The depth is now 2,878 feet. In North Franklin Township, George Bungard & Co. are spudding on the Ellwood Phillips farm. The location is about 1,200 feet east of the Dunkard sand streak on the Adaline D. McKennan estate.

In East Findley Township, Washington County, Meyers, Hoskinson and others are down 640 feet on the M. C. Francis farm. In this township, Natural Gas Co. of West Virginia has made a location on the Ruth Sampson farm. In North Strabane Township, Wasco Fuel Co. has reached 1,785 feet on the J. R. McNary farm.

In Greene County, Wasmuth & Callahan are drilling at 1,725 feet on the Mary Bell Durbin farm in Richhill Township. In this township, Guy Patterson is down 2,360 feet in No. 3 on the T. M. Ross farm. In Dunkard Township, the test on the James and Lewis Vance farm has reached 2,050 feet. W. W. Stewart & Co. are drilling deeper on the Mary Dague farm from the Big Injun sand. It is now 2,680 feet. The test on the Catherine Hughes farm which was drilled deeper struck about 10 bbls. of oil a day in the Fourth sand at 3,168.

DRILLING CLOSE TO CHICAGO

CHICAGO, Nov. 3.—James Nelson and others of Chicago are drilling a test for oil on the Joseph McGlachlan farm, at Harlem Avenue and the Lincoln Highway, approximately 35 miles distant from the Chicago Loop district. A Star drilling machine is being used and the test is down to 300 feet. The owners are looking for oil or gas somewhere between 800 and 1,200 feet in depth.

A. E. FITZGERALD DIES

PETROLIA, Ontario, Nov. 3.—A. Ernest Fitzgerald, prominently known in the oil industry, died recently in the Charlotte Eleanor Englehart hospital here. A son of the late F. A. Fitzgerald, first president of the Imperial Oil Co., he left Petrolia in 1902 and for 25 years was connected with the Standard Oil Co. of Indiana. For the past few years he has lived in Detroit.

JAMES ELAM DIES

MILK RIVER, Alberta, Nov. 3.—James Elam, employed on the Commonwealth Petroleum wells here and on other Alberta oil tests, died here suddenly, aged 42. Mr. Elam was a former resident of Kansas.

Southwest Texas Wildcats

(Continued from Preceding Page)

CALDWELL COUNTY

Anderson's No. 1 Perry, 330 ft. SE and NE lines of 37-ac. tract, Gibdeon Pace Sur. T.D. 1,901 ft.; standing.

O. Dawn's No. 1 F. Tiller, 250 ft. from N line, 1,000 ft. from E line of 37-ac. tract, in G. Hinds Sur. Location.

Fomax Oil Co.'s No. 1 B. G. Tiller, 500 ft. from N line, 150 ft. from W line of tract in G. Hinds Sur. Rigging up.

F. P. Hynes et al's No. 1 Tramwell, 750 ft. from SE line and 330 ft. from NE line of tract in Ester Berry Sur. No report.

Kurz Oil Co.'s No. 1 Kurz ranch fee, 4,600 ft. SW line and 4,300 ft. SE line of Barnard Klekant Sur. T.D. 3,615 ft.; S.D.

F. Meyers' No. 1 Mooney, 260 ft. from road, 330 ft. from middle of SE cor. of 102-ac. tract, Seale Sur. Location.

Stanley Smith's No. 1 J. C. Copeland, about 4 miles SW of Lockhart and beyond the Mebana Estate. Setting up machinery.

DUVAL COUNTY

Conway & Buescher's No. 2 Hoffman, 330 ft. NE and SE lines of Sur. 119. Spudded in and standing.

Grimes et al's No. 1 Fitzsimmons, 300 ft. S line and 150 ft. E line, Sur. 291. Cmtd. surface csg. 50 ft.; standing.

Mills Bennett Prod. Co.'s No. 1 D.C.R.C., 150 ft. N, 4,200 ft. E line of Sur. 192. Drlg. 1,432 ft.; sand with show of oil 1,476-82 ft.

Stieren Oil Co.'s No. 1 J. P. Philp, 1,650 ft. S line, 990 ft. E line, Sur. 320. Drlg. 1,475 ft.

W. B. Stewart's No. 1 Juan Benavides, 3,752 ft. S of the most southerly N line and 330 ft. from SW line of Sur. 355. Drlg. 3,128 ft.

Texas Co.'s No. 1 G. W. Sutherland, making location in Sur. 503. T.D. 3,006 ft.; abd.

Texas Co.'s No. 1 Tom Graham, 5,665 ft. N 65 deg. E and 1,130 ft. S 25 deg. E. W cor. Geo. Reynolds Sur. 572. T.D. 5,142 ft.; drlg. 4,650 ft. in hole; whipstock 4,545 ft. after P.B.

EDWARDS COUNTY

Carter et al's No. 1 W. A. Miers, 990 ft. from N and E lines of Sec. 6, C.C.S.D.& R.G.N.G. Sur. S.D. 402 ft.

Will Olhausen's No. 1-B Turney, 660 ft. from W line, 1,623 ft. from N line of Sec. 176 C.C.S.D.&R.G.N.G. Sur. Drlg. 585 ft.

H. H. Sides' No. 1 Turney, C.C.S.D.&R.G.N.G. Sur. No. 164, 1,320 ft. N line and W line of survey. Standing 1,010 ft.

Harry Adams' No. 1 Holman, 1,650 ft. N line, 330 ft. from E line, Sec. 21, C.C.S.D. R.G.&N.G. Sur. T.D. 583 ft.; in sand at 575-83 ft.; showing for about 1 bbl. daily of dead oil.

FAYETTE COUNTY

Texas Seaboard Oil Co.'s (J. Elmer Thomas and Henshaw Bros.') No. 1 Glecker, 330 ft. SW and SE of N cor. of 93.5-ac. tract in Anna Powell League. T.D. 4,000 ft.; to make Schlumberger test.

FRIO COUNTY

Amerada Pet. Co.'s No. 2 Halff & Oppenheimer, begin at most easterly N cor. of John H. Gibson Sur. No. 16, thence SE along NE line of Sur. 2,100 ft., thence SW at right angles 800 ft. (4 mi. SW of Pearsall). Drlg. soft sand 2,885 ft.

GILLESPIE COUNTY

Gil L. Nixon's No. 3 Lindig, 13,694 ft. S line, 1,333 ft. W line, Maria Josepha Guerra Sur. No. 41, or 6 ft. S of No. 1. Fishing 516 ft.

GOLIAD COUNTY

Oceanic Pet. Co.'s No. 1 Fromme, 1,500 ft. S line, 1,200 ft. W line of 62-ac. tract in P. D. Dexter Sur., 10 miles N of Goliad T.D. 2,685 ft.; to set csg.

Jack Porter's No. 1 Mrs. N. Meyers, NW cor. of 404.54-ac. tract, 1¾ miles SW of Huisache. T.D. 4,561 ft.; abd.

GONZALES COUNTY

Weinert et al's No. 1 A. Knilles, 3,340 ft. S line and same N of river and 150 ft. E line of tract, Ira Nash Sur. T.D. 3,890 ft.; abd. dry.

GUADALUPE COUNTY

Cole Pet. Co.'s No. 1 John D. Puckett, 330 ft. from N and W lines of Share 296, Sal Salvador del Tule grant. Location.

Diamond Half Oil Co.'s No. 1 Wm. Maiserhofer, 506 ft. from E line and 1,500 ft. from N line of 51.85-ac. tract in L. H. Peters Sur. T.D. 2,110 ft.; S.D.

L. E. Trout's No. 1 McKee, Green DeWitt Sur., SW Darst Creek. S.D. 1,200 ft.

HIDALGO COUNTY

Danvers-Harrison et al's No. 1 Guerra, 330 ft. out of SW cor. of 40-ac. tract, Blk. 12, Porcion 41. Cored sand 1,838-46 ft.; preparing to run D.S. test.

Davis & Harrison's No. 1 Lula George, 300 ft. from S and 700 ft. from E lines of Tract 13, Porcion 41, Ancient Jurisdiction of Reynosa. T.D. 4,135 ft.; resumed work.

John Deering et al's No. 1 John C. Engleman, 400 ft. S and W lines, Lot 3, Blk. 79, Mestenas tract. Drlg. 4,700 ft.

Downey & Morton's No. 1 Doskam, 450 ft. from E line, 55 ft. from S line of Blk. 34, Por. 45. Drlg. 1,710 ft.

Union Sulphur Co.'s No. 2 American Rio Grande L. & I. Co., 400 ft. from S and E lines of tract, Blk. 86, North Capisallo district. Drlg. 7,050 ft.

JIM HOGG COUNTY

John D. Norwood's No. 1 C. W. Hellen, 330 ft. N and W lines, Sur. 48. T.D. 1,260 ft. (corrected); standing.

J. M. Shugart's No. 1 R. Holbien, 100 ft. from N line, 330 ft. from S line of Blk. 55, Sur. 17 of Holbien Subd., of Las Animas grant. Spudded in and set surface csg.

JIM WELLS COUNTY

Plymouth Oil Co.'s No. 1 Cuero Cattle Co., 330 ft. from S and W lines of H.T.&B Sur. No. 7, 2½ miles W from Alfred. No report.

Smith & Storey's No. 1 Martha E. Hilworth, 330 ft. N and W from SE cor. of W half of W 436 acres of Stanley Welch Sur. Drlg. 5,045 ft.; gas sand 4,945-66 ft.; to run Schlumberger test.

KARNES COUNTY

California Oil Co.'s No. 1 J. C. Tom, Jr., 466 ft. each way from NW cor. of 6,525-ac. tract, Maria-De Jesus Y. Barbo grant. Drlg. 4,325 ft.

F. P. Hynes et al's No. 1 Swiercy, 2,650 ft. from NW line, 500 ft. from SW line of 100-ac. tract in Gasper Flores Sur. Drlg. 1,544 ft.

R. E. Ceseaux et al's No. 1 Tom Campbell, 330 ft. S and E cor. of farm and survey, J. R. Backer Sur., 12½ miles SW of Falls City. S.D. 1,254 ft.

KENDALL COUNTY

Walter Bradley's No. 1 Werner, John P. Torrey Sur. S.D. 919 ft.

W. R. Shanklin's No. 1 Seidenstick, 1,835 ft. from most easterly E line, 100 ft. from most northerly S line of Antonio Rodegues Chacon Sur. 257. S.D. 400 ft.

KERR COUNTY

Edmiston Oil Corp.'s No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.&W.T. Sur. S.D. 675 ft.

Herbert Oil Co.'s No. 1 J. D. Witt, 13,200 ft. from N line, 1,300 ft. from W line of Sec. 1,923, Hamilton Sur. S.D. 1,896 ft.

Jeff Love and Eastland Oil Co.'s No. 5-B Jeff Love, 1,500 ft. SE of No. 1 and 1,580 ft. from SE cor. and 300 ft. from N line of Sec. 1,591. T.D. 3,465 ft.; waiting on orders.

J. F. Morrissey et al's No. 1 F. A. Karge, 1,400 ft. from S line and 600 ft. from E line of survey, Sec. 1, B.S.&F. Sur. T.D. 1,465 ft.; S.D. for csg.

G. F. Schreiner's No. 3 Jeff Love, 1,444 ft. from W line, 1,194 ft. from S line of Sur., 660 ft. N and 100 ft. E of Evans & Gants' No. 1 Love, Martinez Sur. 1,594. Location.

LaSALLE COUNTY

Standard Oil Co. of D. C.'s No. 1 J. M Martin, 300 ft. S and W lines of 643-ac farm in Sur. 682. Drlg. 2,246 ft.

LEE COUNTY

Jas. E. Pederson's No. 1 Turner, David Ewe son Sur. Running csg. 6,330 ft.

LIVE OAK COUNTY

Coquat's No. 1 Wade McNeil, 1½ miles NW McNeil discovery well. Drlg. below surface csg.

W. H. Heimerich's No. 1 Cartwright, 660 ft. from W line, 330 ft. from S line of Lot 16, Seale, Morris & Seale Sur. Location.

Henderson Coquat et al's No. 1 Robertson Sec. 314. Drlg. 2,100 ft.

Henderson Coquat et al's No. 1 Little, 1,320 ft. NE of S cor. of M. M. Shipp Sur. and 330 ft. N of S line. Drlg. 1,100 ft.

McMULLEN COUNTY

Armoil Prod. Co.'s No. 2 K. Martin, Sur 489. Location.

Beer-Witherspoon's No. 1 Buell, 330 ft. from N and W lines of 40-ac. tract in Fant & Fadden Sur. Drlg. 1,152 ft.

Boling's No. 1 Brown, 1,500-ac., NW Crowther field. Location. Contract calls for 1,000 ft. test.

H. K. Boysen's No. 1 Hagist, 990 ft. S, 330 ft. W of NE cor. Sec. 10, H.&T.C.R.Y. Sur. Drlg. 915 ft.

Circle W Oil Co.'s No. 1 Wheeler, NW cor Sec. 44, of Two Rivers Ranch Subd. Coring 1,165 ft.

Choate & Noble's No. 1 Miles, 330 ft. from S line, 2,750 ft. from E line of 1,280-ac tract in Stephens Sur. Location.

Howard's No. 1-A Claunch, 900 ft. E line, 700 ft. S line of tract in M. Healy Sur. T.D. 780 ft.; coring.

C. C. Shumway's No. 8 Shiner. Rig up.

Charles Wuest's No. 1 Fisher, Roderick O'Boyle Sur. Derrick.

Hy Tound's No. 1 Callihan, James Gardner Sur., NW cor. Blk. 4, Sec. 6. Derrick.

MEDINA COUNTY

C. M. Peacock's No. 1 Odem, 160 ft. from W line, 200 ft. from S line of Castro Sur No. 173-174. Location.

Scoggins & Sanders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E Gage Sur. 395. Drlg. 1,797 ft.

MILAM COUNTY

Frank W. Keller, Inc.'s No. 1 A. L. Lucas, 1,980 ft. from N line, 400 ft. from E line of 178.5-ac. tract in J. Real Sur. Location.

Second Natl. Bank's No. 1 B. P. Ward, 150 ft. SW line, 950 ft. SE line of 100-ac. tract, L. Taylor Sur. Drlg. 315 ft.

NUECES COUNTY

Buff Pet. Co.'s No. 1 Vincent Bluntzer, 660 ft. N line, 660 ft. E line of Share 7 of Bluntzer Subd. Rigging.

Clymore Oil Co.'s No. 1 Palo Alto Farms, 3,640 ft. from N and E lines of Sec. 193 of Bishop Subd. Derrick.

Texon Royalty Co.'s No. 1 Robert Driscoll, 330 ft. from N line, 5,697 ft. from W line of 880-ac. Driscoll tract and E of Simmons & Perry tract. Rig up.

REAL COUNTY

G. J. Heartwell et al's No. 2 L. J. Hall, 894 ft. from W line and 2,153 ft. from S line of A.B.&M. Sur. No. 175. C.O. at 2,310 ft.; making considerable gas.

SAN PATRICIO COUNTY

Allied Minerals' No. 1-A Ramsey, 466 ft. E, 330 ft. N of SW cor. of the North B Giddings Sur. on a 1,000-ac. tract. Drlg. sandy shale 2,462 ft.

Lonnie Glasscock's No. 1 M. F. Timmons, 330 ft. out of SE cor. of Blk. 37, San Patricio townsite. Drlg. 5,300 ft.

Gum Hollow Oil Co.'s No. 1 J. G. Willacy 2 mi. W Portland. Drlg. 6,435 ft.

STARR COUNTY

Cooper & Andrews' No. 1 J. M. Martinez, SW cor. Sec. 135. Location.

C. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E line of Sec. 6 (NE part of county). T.D. 2,202 ft.; coring.

E. P. Evans' No. 1 Kelsey Bass, 330 ft. N of State Highway 4, Sec. 7, Subd. Porciones 75,76 and 77. Drlg. 2,025 ft.

C. L. Smith et al's No. 1 J. M. Longfellow, 330 ft. out of NW cor. of Sur. No. 231 Drlg. 1,215 ft.

Heep Oil Co.'s No. 1 Guerra, 330 ft. from NE and SE lines of Blk. 35, J. N. Crawford Subd., Porcion 54, Jurisdiction of Mier. Rigging up.

Smith & Weston's No. 1 M. M. Garcia, Blk 9, Sur. 908. Location.

Sun Oil Co.'s No. 1 Gonzales & Clark, 990 ft. out of NW cor. of NE Sec. 372, T.T Ry. Sur. No. A-778. T.D. 3,035 ft.; straightening hole.

United Prod. Co.'s No. 1 Guerra, 36, 170 ft from NE line, 1,521 ft. from NW line of Porcion 55. Drlg. brown shale with streaks of sand; 1,780 ft.

E. L. Younkin's No. 1 Kelsey Bass, 330 ft from S line, 7 ft. from W line of Blk 18 in Porcion 87. Drlg. 2,140 ft.

TRAVIS COUNTY

Marts & Beavens' No. 1 Emil Bloemquist, 150 ft. from NW line and SW line of 99½-ac. tract in Peter C. Harrison Sur. S.D. 1,300 ft.

UVALDE COUNTY

Humble Oil & Ref. Co.'s No. 1 R. L. Anderson, 7,450 ft. SW of NE line and 9,100 ft. SE of NW line of J. J. Guerra Sur 8 mi. NE of Uvalde. T.D. 4,529 ft.; drill pipe twisted off.

C. T. Word's No. 1-B Truelove, 45 ft. E of No. 1-A. Drlg. 2,025 ft.

WEBB COUNTY

Detterhaim & Jones' No. 1 M. Jones, 600 ft. E line, 1,620 ft. S line of Sur. 1,440. Drlg. 310 ft.

W. W. Lincoln's No. 1 M. B. Velpe, 3,300 ft. N, 150 ft. W line of Sur. 2,011. T.D. 2,797 ft.; making repairs.

W. P. Morris' No. 1 A. M. Bruni, 994 ft. NW line, 943 ft. NE line, Blk. 95, G. M. Brown

Subd. Saltea pasture, in J. V. Borrego grant.
Drlg. 1,605 ft.

WILLACY COUNTY

W. W. Silk's No. 1 Stillman, Lot 16, Blk 30, Santa Rosa Subd., Share 44.
No report.

WILLIAMSON COUNTY

Johnson & Ray's No. 1-A Mary Smith Oxford, 350 ft. S, 40 deg. E of No. 1, Williams Sur.
T.D. 610 ft.; S.D.

Mann & Ross et al's No. 1 F. Ross, John Bevil Sur. 56.
Drlg. 1,025 ft.

T. J. McConnell's No. 1 J. R. Nazier, 150 ft. from S line and San Gabriel River and 150 ft. from E line of 124-ac. tract in Zarso Sur.
T.D. 675 ft.; standing in chalk.

J. A. Morgan Russell's No. 1 Nelson Est. 150 ft. S line and 1,115 ft. E line of J L. Justin No. 2 Sur., 5 miles S of Georgetown.
T.D. 755 ft.; S.D.

J. Morgan Russell's No. 2 Nelson, 3,200 ft. from CEL of W. Donaho Sur. No. 117, 1,600 ft. from CSL.
Drlg. in Del Rio 180 ft.

Stalley & Caffy's No. 1 A. J. Nelson, 850 ft. from SE line and 150 ft. from NE line of Barney C. Love Sur.
T.D. 355 ft.; drlg.; H.F.W.

WILSON COUNTY

Ray Oil Co.'s No. 1 J. M. McDaniel, 1,700 ft. from SW line, 350 ft. from NW line of 193.6-ac. tract in Concepcion Bostelle Sur. No. 9.
Rigged up and S.D.

J. C. Yancey's No. 1 Lyssy, 300 ft. from SE and SW lines of lease in D. J. Holt Sur.
T.D. 1,600 ft.; S.D. in shale.

ZAPATA COUNTY

C. C. Crews' No. 1 M. D. Slator, 2,111 ft. from SW line, 1,980 ft. from SE line of Blk. 1, Mission Oil Co. Subd. of Slator ranch, Borrego grant.
T.D. 1,739 ft.; standing.

Danvers & Harrison's No. 1 M. J. Vela, 634 ft. NE line and 300 ft. NW line, or 8,140 ft. E line and 330 ft. N line of Por. 39, Blk. 7, Bela Subd.
T.D. 1,605 ft.; washing to bottom.

J. W. Edwards' No. 1 D. A. McAskill, 150 ft. from N and E lines of Blk. 63, J. W. Edwards Subd. of 4,046.6-ac. tract out of Corralitos Subd. of the J. V. Borrego grant.
Drlg. 1,605 ft.

Merle Gunby's No. 3 Alice D. Haynes, 300 ft. SE and NE lines, Blk. 9, Haynes Subd., Comitas and Villa grant.
Drlg. 2,155 ft.

H. & M. Drlg. Co.'s No. 1 Slater, 614 ft. from SW line, 150 ft. from SE line, Blk. 66, J. B. Barrego grant.
T.D. 22 ft.; standing.

H. V. & W. Oil Co.'s No. 1 Cuellar, 150 ft. NE line and 450 ft. SE line of Blk 3, Sur. 3, Pappas Subd., Por. 34.
T.D. 1,125 ft.; abd.

Howell Muckelroy's No. 1 Filemn Flores, 77 ft. from SE line on NE line Lot 1, Blk. 30, Por. 37.
Derrick.

Joe Palmer's No. 11 S. Vela, 330 ft. from NE and SE lines of Blk. 170, Share 4 of L. Grillo grant (3 mi. E of Redondo Pool)
T.D. 1,510 ft.; abd.

E. P. Wells' No. 1 S. E. Garcia, 150 ft. from N and E lines of 300-ac. tract in Pedernal grant.
Moving in rig.

Southwest Texas Proven

Week Ending November 3

NORTH DALE POOL—BASTROP COUNTY

Cole Pet. Co.'s No. 1 Rubin Gage, NE cor. of tract, 150 ft. each way from corner.
Location.

Cole Pet. Co.'s No. 6-B American Natl. Bk., 150 ft. NE and SE lines of 700-ac. tract, Gage Sur., Blk. 31.
T.D. 1,905 ft.; dry and abd.

Joe E. Mills' No. 1 Mrs. W. J. Cardwell, 900 ft. from SE line, 1,300 ft. from SW line of tract, J. A. Navarro Sur.
Rigging up and S.D.

Joe E. Mills et al's No. 1 Wm. Litton, 630 ft. from SE line, 850 ft. from SW line of 320-ac. tract in Navarro Sur.
T.D. 1,753 ft.; standing; showing for small well.

Porter and Neal's No. 1 J. F. Wolff, 150 ft. from NE line, 3,800 ft. from SE line of F. Edmundston Sur.
Location.

CAESAR—BEE COUNTY

Luling O. & G. Co.'s No. 4 Ruhman, 150 ft. from S line, midway between E and W lines of Blk. 13.
T.D. 3,062 ft.; I.P. 114 bbls. per day; tubing pressure 500 lbs.; csg. pressure 680 lbs.; gravity 26 deg.

NORTH PETTUS FIELD—BEE, GOLIAD AND KARNES COUNTIES

Houston Oil Co.'s No. 7-B Niehaus, 660 ft. SE of No. 4-B, Talley Sur.
Drlg. 2,000 ft.

Houston Oil Co.'s No. 9-B Niehaus, 660 ft. SE of No. 6-B, B.S.&F. Sur.
Location.

United Prod. Co.'s No. 47 Ray, 300 ft. NW from SW cor. of Houston Oil Co.'s Neihaus "B" lease along Neihaus-Ray property line, thence 330 ft. in SW direction at R/A to previous course.
Drlg. shale and shells 3,750 ft.

Diamond Half Oil Co. et al's No. 3 Grady Smith.
T.D. 3,668 ft.; cmtd. csg.

TULETA—BEE COUNTY

E. M. Jones' No. 1 Skinner & Harris, 330 ft. from N and W lines of E 80-ac. of NW of Sec. 10 Ragsley Subd. of Uranga grant.
Location.

Millie Bennett's No. 1 Harris, 330 ft. out of SE cor. NW Sec. 9, Ragsley Subd., Uranga grant.
T.D. 3,922 ft.; cleaning itself; ¼-in. choke; tubing pressure 900 lbs.; csg. pressure 1,200 lbs.

Millie Bennett's No. 1 Tuleta Mercantile Co., 330 ft. from N and W lines of SW Sec. 10.
Moving in.

Whisenant & Trenchard's No. 1 Rapp C N½ NW NE Sec. 10.
T.D. 3,923 ft.; I.P. 11 bbls. per hr.; ¼-in. choke.

Whisenant & Trenchard's No. 2 Rapp, 330 ft. from N and E lines of N½ NW NE Sec. 10.
Drlg. 3,300 ft.

HOCH—BEXAR COUNTY

H. J. Trawalter's No. 7 fee, 150 ft. from N line, 450 ft. from E line of 202-ac. tract in S. Jett Sur. No. 53.
Drlg. 410 ft.

VON ORMY—BEXAR COUNTY

W. L. Umburn's No. 1 Billharts, in SW cor. of tract, offsetting Strumberg well, F Rolen Sur.
Drlg. Edwards lime with sulphur wtr. at 1,335 ft.

DALE—CALDWELL COUNTY

W. B. Hinton's No. 1 Osteen, 150 ft. SW line, 450 ft. NE line of 70-ac. tract in Swearinge Sur.
Moving in rig.

EAGLE HILL—DUVAL COUNTY

Tide Water Oil Co.'s No. 1 J. R. Foster, 1,650 ft. from S line and 165 ft. from E line of Sur. 200.
Drlg. 2,165 ft.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Brown & Nessly's No. 3 Runnels, 330 ft. S line, 990 ft. W line of NE NW Sur. 62.
Drlg. 610 ft.

Edna Bryant et al's No. 1 J. W. Kidd, 430 ft. S line, 315 ft. E line of Sur. 56.
Moving on.

Central Producers, Inc.'s No. 3 Luptack, 950 ft. S line, 1,450 ft. E line of Sur. 41.
T.D. 1,574 ft.; comp.; 12,000,000 ft. of gas daily.

Edgington & Murry's No. 2 Winch & Henne, 330 ft. from E line, 990 ft. from N line, Blk. 15, Sur. 250.
T.D. 2,376 ft.; W.O.C.

Government Wells Oil Corp.'s No. 5 State, 330 ft. from N line, 990 ft. from W line of Sur. 60.
T.D. 2,222 ft.; I.P. 35 bbls. per hr.

Government Wells Oil Corp.'s No. 6 State, 330 ft. from N line, 1,650 ft. from W line of Sur. 60.
Drlg. 2,005 ft.

K. F. Hasselman's No. 3 Moody, 330 ft. from W line, 150 ft. from S line of S half SW of Sur. No. 60.
Rig up.

Humble O. & R. Co.'s No. 36 C. W. Hahl, 990 ft. N line, 2,310 ft. W line of Sur. 360.
Drlg. 2,235 ft.

Humble O. & R. Co.'s No. 49 Paul White, 990 ft. E line, 330 ft. N line of Sur. 50.
T.D. 2,395 ft.; set 7-in. csg. at 2,342 ft.; W.O.C.

Magnolia Pet. Co.'s No. 3-C Hahl, 330 ft. S and E lines of Sur. 61.
T.D. 2,369 ft.; cmtd. csg. 2,357 ft.

Magnolia Pet. Co.'s No. 8 Hahl-Southerland, 330 ft. S line, and W line of NW, Sur. 61.
Coring sand 2,305 ft.

Magnolia Pet. Co.'s No. 3 Hahl-Norton, 330 ft. S and W lines of Sur. 61.
Rig.

Magnolia Pet. Co.'s No. 2 Hunt, 330 ft. S line and 250 ft. W line, SE of Sur. 46.
Derrick.

Magnolia Pet. Co.'s No. 14 D.C.R.C., 990 ft. E line, 1,650 ft. S line of Sur. 59.
T.D. 2,230 ft.; comp.; 15,000,000 ft. of gas, spraying 10 bbls. of oil.

Magnolia Pet. Co.'s No. 10-A C. W. Hahl, 330 ft. S and W lines of S½ SE Sur. 45.
T.D. 2,311 ft.; testing.

Magnolia Pet. Co.'s No. 38 D.C.R.C., 990 ft. W line, 1,650 ft. S line of Sur. 209.
T.D. 2,322 ft.; I.P. 10 bbls. per hr.; ⅝-in. choke.

Magnolia Pet. Co.'s No. 39 D.C.R.C., 990 ft. W line, 2,310 ft. S line of Sur. 209.
Drlg. 2,155 ft.

Magnolia Pet. Co.'s No. 4 A. L. Tankersley, 330 ft. S line, 250 ft. E line of SW of Sur. 46.
Location.

Russ Pet. Co.'s No. 2-C Hahl, 990 ft. N and W lines of S½ SW Sur. 62.
Sand 2,338-50 ft.; 7-in. csg. 2,338 ft.; T.D. 2,350 ft.; letting 75 bbls. per day.

Russ Pet. Co.'s No. 3-C Hahl, 360 ft. E line, 370 ft. N line of NW of Sur. 62.
Drlg. 2,315 ft.

Smith & Storey's No. 11 Lundell, 330 ft. S and W lines of Sur. 2.
T.D. 2,202 ft.; waiting on pump.

Sun Oil Co.'s No. 73 Weiderkehr, 660 ft. S of No. 70 on 3,085-ac. tract in Sur. 359.
Rig.

Sun Oil Co.'s No. 3 Henne-Winch, 330 ft. W and E line of Sun tract in Blk. 15, Sur. 250.
Moving on.

Sun Oil Co.'s No. 74 Weiderkehr, 990 ft. N line, 1,650 ft. W line of Sur. 359.
Location abd.

Trapshooter Reilly's No. 3-B C. W. Hahl, 330 ft. S line, 750 ft. E line of Blk. 27, Sur. 250.
Drlg. 1,810 ft.

PIEDRAS PINTAS—DUVAL COUNTY

Tom Graham and Texon Royalty Co.'s No. 3 Parr, 2,170 ft. N line, 2,250 ft. E line, 150 ft. S of No. 1, Sur. 185.
Skidding.

LUCAS—LIVE OAK COUNTY

Lion Oil & Ref. Co.'s No. 3 McNeil, J. Curry Sur., 660 ft. N of No. 1.
Drlg. 5,480 ft.

Houston Oil Co.'s No. 28 Cartwright, 1,000 ft. S of No. 27, and 112 ft. E of railroad.
S.D. 2,956 ft.; recmtd. csg.

DARST CREEK—GUADALUPE COUNTY

Grayburg Oil Co.'s No. 1 Mrs. S. M. Roamel, 493 ft. N line, midway between W and E lines of 50-ac. lease.
T.D. 2,510 ft.; running 6⅝-in. csg.

SAM FORDYCE—HIDALGO COUNTY

W. E. Butler's No. 1 F. B. Guerra, 93 ft. N line, 294 ft. S and W lines of 2.5-ac. tract in Tract 254, Por. 39-40.
Location.

Circle W Oil Co.'s (Navarro) No. 1 Seabury, George & Taylor, 330 ft. S and E lines of SE 51-ac. tract in Tract 256, Por. 38.
Material on ground.

Clements et al's No. 1 F. B. Guerra, Tract 254, Por. 39.
T.D. 2,800 ft.; I.P. 25 bbls. per hr.; 250 lbs. working pressure.

Jack Clements' No. 1 Felipe Farias, 150 ft. from N and E lines of Share 273, Por. 39, Reynosa.
Derrick.

Cosmo Pet. Co.'s No. 1 F. B. Guerra, 330 ft. W line, 130 ft. N and S lines of N 25-ac. of S 100-ac. of E 290-ac. of Tract 254, Por. 39-40.
Location.

Danvers-Harrison & Davis' No. 1 Dr. Austin, center of E 7.3-ac. of S 14.4-ac. in Share 282, Por. 39.
Location.

Edwards & Olford's No. 1 E. Flores, 330 ft. N line, 126 ft. E line of Tract 267, Por. 38.
Drlg. 2,300 ft.

M. Porter Evans' No. 1 John W. Lawrence, 330 ft. from N and W lines of W 19.04-ac., Share 274, Por. 39.
Location.

Porter Evans' No. 1 David Flores, Tract 262, Por. 38.
S.D. 2,230 ft.

Heep Oil Co.'s No. 1 W. R. Jackson, 344 ft. E and W lines, Tract 278, oPr. 39-40.
Drlg. 900 ft.

Heep Oil Co.'s No. 1 Guerra, 330 ft. from W line, 185 ft. from N line of 25-ac. tract in Por. 40.
Coring sand 2,700 ft.

R. C. Horne's No. 1 F. B. Guerra, 93 ft. S line, 294 ft. E and W lines of NW 2.5-ac. tract in S 125 acres of E 290 acres of Tract 254, Por. 39-40.
Location.

T. I. Larson's No. 1 G. G. Salinas, 330 ft. S and W lines of Share 10, Por. 41.
Location.

Lucky, Blocker & Bishop's No. 2 F. B. Guerra, 300 ft. S line, 2,511 ft. W line of Tract 254, Por. 39.
Moving in rig.

Moncrief & Showers' No. 1 F. B. Guerra, 330 ft. from N and E lines of NE of W 40 acres of S 80 acres of W½ of Share 254, Por. 39, J. of Reynosa.
T.D. 2,306 ft.; I.P. 20 bbls. per hr.; 750 lbs. csg. pressure; 1,025 lbs. tubing pressure.

Moncrief & Showers' No. 1 John Lawrence, on 9.52-ac. tract.
Derrick comp.; moving in machinery.

Reynosa Oil Co.'s No. 1 Guerra, 330 ft. from W line, midway between N and S lines of NW 10-ac. of SW 40 acres of Tract 254, Porcion 39.
Machinery on ground.

Reynosa Oil Co.'s No. 1 P. S. Rivas, 330 ft. from N line, 258 ft. from W line of N 30-ac., Tract 393, Por. 39.
Location.

H. B. Simms' No. 1 Guadalupe, F. V. de Rivas, 129 ft. N and S lines, 209 ft. E and W lines of Lot 101, Tract 349, Por. 40.
Location.

Ed Sullivan's No. 1 E. B. Guerra, center of NE 10.77 acres of SW 40.7 acres of Tract 254, Por. 39.
Location.

Ed Sullivan's No. 1 E. Flores, 330 ft. N line, 107 ft. E and W lines of Tract 266, Por. 38.
Location.

Van Dresar et al's No. 1 W. R. Jackson, 330 ft. from N and W lines of 92-ac. tract, Por. 38-39-40, Blk. 278.
Location.

Otto Woods' (Kingwood) No. 1 Flores, 150 ft. E line, 296 ft. S line of Tract 262, Por. 38.
Coring 2,700 ft.

Otto Woods' No. 1 F. B. Guerra, 1,700 ft. NW of discovery well.
T.D. 2,806 ft.; sand 2,760-66 ft.; well under control.

Otto Woods' No. 2 F. B. Guerra, 600 ft. due N of discovery well, Tract 254, Por. 39.
T.D. 2,794 ft.; I.P. 10 bbls. per hr.; 1,100 lbs. tubing pressure; 1,250 lbs. csg. pressure, closed in.

Otto Woods' (Kingwood) No. 3 F. B. Guerra, 300 ft. S line, 1,077 ft. W line, Tract 254, Por. 39.
Moving in machinery.

Otto Woods' No. 2 John Lawrence, 330 ft. from N and E lines of W 40 acres of Tract 274, Por. 39.
T.D. 2,733 ft.; abd.

Otto Woods' No. 3 John Lawrence, 330 ft. from S and W lines of W 40 acres of Tract 274, Por. 39.
Rigging up.

Otto Woods' No. 4 John Lawrence, 330 ft. from E line, 250 ft. from S line of W 40 acres, Tract 274, Por. 39.
Rigging up.

Windsor Oil and Circle W Oil Co.'s No. 1 J. H. Dosa, 330 ft. from N and W lines of 55 acres or in Tract 278, Por. 40.
Location.

JACOB POOL—McMULLEN COUNTY

American Gas Co.'s No. 1 L. Jacobs Corp., 350 ft. W of SE cor., 160 ft. SE line of tract in Faden Sur.
Spudded and S.D.

C. R. Kennon's No. 4 H. L. Lark, 175 ft. from S line, 175 ft. from W line of E 20-ac. of Blk. 15 of Scrugham Sur.
Location.

C. R. Kennon's No. 5 H. L. Lark, 175 ft. from S and E lines of E half of Blk. 15 of Scrugham Sur.
Location.

Loma Oil Co.'s No. 30 Jacob, 660 ft. S, 330 ft. W of NE cor. Sec. 10, H.&T.C.R.Y. Sur.
Drlg. 600 ft.

Loma Oil Co.'s No. 1 H. E. Palmer, 330 ft. E, 3,000 ft. S line, Sparks Sur.
Drlg. 1,700 ft.

Stewart & Holding Co.'s No. 3 Jacob, 660 ft. S and 660 ft. E of No. 2, John Fadden Sur.
T.D. 895 ft.; coring.

Ormsby & Stewart's No. 4 Jacob, one-half mi. S of No. 3.
T.D. 974 ft.; I.P. 4 bbls. per day.

Sunland Oil Co.'s No. 1 H. L. Lark, W. H. Jacob Sur. No. 8.
T.D. 1,026 ft.; making pump test.

R. P. Whitefield's No. 1-A Jacob, 1,500 ft. from W line, 1,200 ft. from S line of SW of Sur. 17.
T.D. 1,116 ft.; coring.

SINTON—SAN PATRICIO COUNTY

Heep Oil Corp.'s No. 2 R. Welder, 466 ft. from S line, 2,000 ft. from E line of Adeline Welder tract in Victor Loupsey Sur Derrick.

Heep Oil Corp.'s No. 4 R. Welder, 466 ft. from S and W lines, 300-ac. tract, Victor Loupsey Sur.
T.D. 7,247 ft.; drill pipe stuck.

Plymouth Oil Co.'s No. 3-A Wheeler.
Location.

JEFFRIES-LAMBETH—STARR COUNTY

Weekly Oil Co.'s No. 2 S.C.C.C., 330 ft. from S and W lines of Blk. 19, Porcion 89.
T.D. 2,540 ft.; coring shale.

LOS OLMOS—STARR COUNTY

J. P. Kennedy's No. 8 Kelsey-Bass, 200 ft. SE of No. 7 Kelsey-Bass in Blk. 7 of Porcions 75, 76 and 77.
Location.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-C M. Guerra & Son, 1,320 ft. NE of No. 4-C La Sacatosa grant
Location.

AGUA DULCE—NUECES COUNTY

Clymore Prod.'s No. 3 Ingram, 660 ft. from E and S lines, Sec. 6, Blk. 6, Peters Subd
Derrick down.

Clymore Prod. Co.'s No. 3-D Ingram, 660 ft. from S and W lines of Lot No. 7, Sec. 6, Peters Subd. No. 2.
Location.

Clymore Prod. Co.'s No. 1-C Ollie Furl, 660 ft. N and E lines of Lot No. 3, Sec. 7, Peters Subd. No. 2.
Moving in rig.

SAINT—NUECES COUNTY

Southern Mineral Corp.'s No. 4 Ocher, 1,320 ft. S line and 417 ft. E line of Ocher 202.53-ac. tract in Sec. 8.
Location.

KIMBRO—TRAVIS COUNTY

Humble O. & R. Co.'s No. 2 Buck Christian 330 ft. SE cor. tract, Kemp Sur.
T.D. 827 ft.; W.O.C.

Humble O. & R. Co.'s No. 2 Peterson, 330 ft. NE and SE lines of 127-ac. tract.
Location.

WEST COLE POOL—WEBB COUNTY

American Liberty Oil Co.'s No. 4-A Bruni, 777 ft. SW line, 1,598 ft. SE line of Sur. 6, Foltz Subd., Arispe grant.
Drlg. 2,605 ft.

American Liberty Oil Co.'s No. 6-A Bruni, 330 ft. NW line, 1,003 ft. SW line of Sur. 6.
Drlg. 2,805 ft.

American Liberty Oil Co.'s No. 2-B Bruni, 418 ft. NE line, 260 ft. NW line of Blk. 12, Sur. 5.
T.D. 300 ft.; W.O.C.

Herman Brown's No. 3 Bruni Est., 343 ft. NE line, 260 ft. SE line of Blk. 2, Sur. 5, Arispe grant.
Drlg. 2,010 ft.

Cole Pet. Co.'s No. 87 R. Benavides, 990 ft. SE line, 330 ft. SW line of Sur. 1.
Drlg. 1,505 ft.

French Oil Co.'s No. 1 Perez, 330 ft. E line, 2,310 ft. N line of Sur. 460.
Drlg. 2,155 ft.

Kalmore's No. 1-B Bruni, 330 ft. to W line, 418 ft. SW line, Blk. 33, Sur. 5, Adams Subd., Mariano Arispe grant.
No report.

O. W. Killam's No. 28 Bruni, 1,437 ft. NE line, 2,172 ft. SE line, Blk. 6.
T.D. 3,405 ft.; running csg.

Sun Oil Co.'s No. 2 Bruni, 418 ft. NE line, 260 ft. SE line, Blk. 9, Sur. 5.
Drlg. 1,605 ft.

Starr State Oil Co.'s No. 11 Yeager, 200 ft. S line, 450 ft. E line of 632-ac. tract in Share 5 of Los Animas grant.
T.D. 3,430 ft.; testing.

BYERSVILLE—WILLIAMSON COUNTY

G. L. Rowsey's No. 2 Heep, 450 ft. SW line, 2,750 ft. from creek, H. White Sur.
Location.

G. L. Rowsey's No. 1 Lange, 150 ft. SW line, 1,900 ft. N of creek, Hamilton White Sur.
Drlg. 490 ft.

G. L. Rowsey's No. 2 Lange, 2,850 ft. from creek, H. White Sur.
Location.

G. L. Rowsey's No. 1-C Sladek, 150 ft. NE line, 2,621 ft. N of creek in H. White Sur.
Drlg. 865 ft.

G. L. Rowsey's No. 2-C Sladek, 150 ft. NE line, 2,921 ft. N of creek, H. White Sur.
Drlg. 325 ft.

ESCOBAS—ZAPATA COUNTY

Trinity Drillers and J. C. McIntyre's No. 1 M. Trevino, 25 ft. W line, Blk. 13, Sur. 412, 150 ft. SE of Cerrito Blanco grant.
Drlg. 1,015 ft.

United Prod. Co. et al's No. 1 Ramirez, 225 ft. from NE and SE lines of lease.
Drlg. 154 ft.

JENNINGS—ZAPATA COUNTY

Texas Co.'s No. 57 Whitehead, 1,115 ft. SE line, 18,992 ft. S line of Cerrito Blanco grant.
Sand 1,217-20 ft.; 7-in. csg. 1,180 ft.

RANDADO—ZAPATA AND JIM HOGG COUNTIES

Sulgrave Oil Co.'s No. 1-A Maryland Trust Co., 664 ft. from S line, 662 ft. from E line of Tract A, Blk. 29, Sur. 314.
T.D. 1,976 ft.; reaming to make test.

New Locations in Cooper Area and in Wyoming; Southern Utah Gasser to Be Deepened for Oil

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Nov. 5.—Two new locations in the Cooper area in New Mexico brought the number of operations up to 16. Phillips Petroleum Co.'s No. 8 Woolworth gauged 935 bbls. in 10 hours through the 2½-inch tubing. One completion and four new locations were reported in the Eunice area, the Ohio Oil Co.'s No. 2 State-McDonald gauging 27,000,000 feet of gas a day. Maljamar Oil & Gas Co.'s No. 4 Baish, in the Maljamar area, had a gas blowout and is attracting attention. Pecos Valley Gas Co. completed an average gas well in the Artesia district in Eddy County. One new operation was reported in San Miguel County.

There were no completions or new operations reported in Colorado.

Locations for two important wildcats in Wyoming were released. Ohio Oil Co. will drill to the Sundance on the Medicine Bow structure in Carbon County and Wyoming Oil & Refining Co. will test the Madison on the Paintrock structure in Big Horn County. Dry Creek Oil Co. encountered another big flow of gas in its fault-block test in South Oregon Basin. Kirk Oil Co. is completing its No. 2 Kirk on the Frannie Dome, which swabbed 350 bbls. a day initial. Osage had one dry hole and one new operation.

One gas well and three oil wells were completed in the Cut Bank Field in Montana. The gas well made 10,000,000 feet initial and the best oil well was Santa Rita Oil & Gas Co.'s No. 4 Tribal, at the extreme northwestern edge of the field, which swabbed 310 bbls. the first day. One new operation was reported in the Kevin-Sunburst Field.

Ramsey Petroleum Corp. will deepen its big gas well in southern Utah in search of oil.

NEW MEXICO

United States District Judge Colin Neblett rendered a decision at Santa Fe in the Humble Oil & Refining Co. case in which the court held that the ad valorem tax on the gross production of oil and gas under the act of 1925 does not include equipment used in producing same and that another tax on equipment can be levied. The Humble company brought suit in June, 1933, for an injunction restraining officials of Lea County, the state tax commission and others from enforcing the provisions of an act passed in 1921 providing for a tax on the physical properties of oil companies. The complaint alleged that this constituted double taxation since the production tax under the act of 1925 included the tax authorized in the 1921 act. The company sought an order to restrain the enforcement of the 1921 act.

Auction sales of oil and gas leases on state land yielded the state public lands commission $190,357 in the first 10 months of 1934, of which $132,324.88 was bonuses paid and $58,032.46 was annual rentals paid. The land commissioner holds sales of leases on the tenth of each month at Santa Fe.

Four seismograph parties are reported working in southeastern New Mexico. These include one each for the Texas Co. in Township 20s, Range 34e; Stanolind Oil & Gas Co. in Township 21s, Range 31e; Sinclair Prairie Co. in Township 20s, Range 38e; and Humble Oil & Refining Co. in Lea County.

Petroleum Information, Inc., reports that a check of offset drilling in Lea County in 1935 will require approximately 50 wells for Humble Oil & Refining Co.

Cooper Area

Two new locations in the Cooper area this week brought the number of operations up to 16. These include Phillips Petroleum Co.'s No. 9 Woolworth, C NW NE Section 27-24-36, a south offset to its No. 8 Woolworth, and General Crude Oil Co.'s No. 3 Meyers, C NW SE Section 22-24-36, which is building rig.

Phillips Petroleum Co.'s No. 8 Woolworth, C SW SE Section 22-24-36, reported a completion last week, gauged 935 bbls. in 10 hours through the 2½-inch tubing, with 1,400,000 feet of gas. The 7-inch was cemented at 3,483 feet with 400 sacks and the pay was at 3,483-3,503 feet. The same company's No. 7 Woolworth, C SE SW Section 23-24-36, which was reported two weeks ago as making 10 bbls. an hour through a three-eighths-inch choke from pay at 3,475-3,500 feet, is not yet officially completed, due to a fishing job. It ran the 5½-inch to 3,475 feet.

Humble Oil & Refining Co.'s No. 1 Coats, C NW NE Section 10-24-36, which was on fire for several days, has rebuilt rig and is now rigging up rotary to resume at 3,355 feet. Same company's No. 1 Thomas, C SW SE Section 23-24-36, which plugged back from 3,602 feet to 3,586 feet, swabbed water from 3,475-3,586 feet for 48 hours and then plugged back to 3,470 feet and is waiting on cement. The Humble company's No. 2 Cooper, C NE NE Section 23-24-36, has rig up. Phillips Petroleum Co.'s No. 6 Woolworth, C NW NW Section 26-24-36, has rig up. The Texas Co.'s No. 1 Everett, C SE NW Section 35-24-36, is building rig, and Amerada Petroleum Corp.'s No. 1 Everett, C NE NW Section 35-24-36, is rigging up rotary. Gypsy Oil Co.'s No. 1 Cooper, C SW NE Section 23-24-36, is bottomed at 3,580 feet and is preparing to take a drill stem test at 3,550-80 feet. Cores showed saturation at 3,550-60 and 3,571-74 feet. Continental Oil Co.'s No. 1 Gates, C NE NW Section 23-24-36, set the 9⅝-inch at 1,679 feet with 600 sacks and is drilling at 1,690 feet in anhydrite and salt. Stanolind Oil & Gas Co.'s No. 2-A Meyers, C NE NE Section 22-24-36, cemented the 9⅝-inch at 1,528 feet with 450 sacks and is drilling at 2,095 feet in salt and anhydrite. Empire Gas & Fuel Co.'s No. 1 Everett, C NE SW Section 35-24-36, is building rig.

Hobbs Area

Oil Well Drilling Co. and others' No. 1 Grimes, SW NE SE Section 20-18-38, is drilling at 3,797 feet in anhydrite. The Gypsy Oil Co.'s No. 4 East Grimes, C NE NE Section 33-18-38, cemented the 7-inch at 3,970 feet with 150 sacks and is waiting. It had gas at 3,690-3,705 feet. National Securities Oil Co.'s No. 1 Linam, NE SE SW Section 33-18-37, is rigging up cable tools at 4,188 feet to drill deeper.

Jal Area

E. B. Guess' No. 1-B Justis, SW NW NW Section 20-25-37, is drilling at 200 feet in red rock. Repollo Oil Co.'s No. 1 Gloyd, SW cor. SE Section 12-25-36, is drilling at 3,297 feet in lime and had a show of gas at 3,141-45 feet and an increase at 3,235-39 feet, but no test was made. The Texas Co.'s No. 2-B Shepard, NW NE SE Section 6-26-37, is drilling at 2,487 feet in anhydrite, and Continental Oil Co.'s No. 12-A-2 Wells, C NW NE Section 12-25-36, is rigging up rotary at 150 feet. Empire Gas & Fuel Co.'s No. 1 Dyer, NE SW SE Section 31-25-37, is rigging up rotary.

Eunice Area

One completion and four new locations were reported in the Eunice Field. Ohio Oil Co.'s No. 2 State-McDonald, C NW SW Section 14-22-36, was plugged back from 4,350 feet to 3,850 feet and completed as a gas well, gauging 27,000,000 feet a day from pay at 3,150-3,850 feet. The 8⅝-inch was cemented at 3,096 feet. It had an oil show with sulphur water at 4,266-4,350 feet.

The new locations are as follows Peerless Oil & Gas Co.'s No. 1 State, C SE NE Section 29-21-36; Shell Petroleum Corp.'s No. 1 State, C SE NE Section 12-21-35, rigging up rotary; Gypsy Oil Co.'s No. 2 Bell-State, C SE SE Section 8-21-36; and Continental Oil Co.'s No. 1-B-9 Meyers, C NE SW Section 9-21-36, cellar and pits.

Shell Petroleum Co.'s No. 1 State, C NE SE Section 1321-35, a location since last June, is abandoned and will not be drilled. It was to the west of the development.

Continental Oil Co.'s No. 17-A-4 Meyers, C NE SW Section 17-21-36, was deepened from 3,950 feet to 3,997 feet without showing any improvement. It was treated with 2,000 gallons of acid and swabbed down 1,000 feet, showing a scum of oil on the water. It may retreat. Same company's No. 8-A-2 Meyers, C SE SW Section 8-21-36, cemented the 7⅝-inch at 1,591 feet with 250 sacks and is drilling at 2,895 feet in anhydrite. The Atlantic Oil Co.'s No. 1-C State, C SW SW Section 29-21-36, is drilling at 1,470 feet in sandy lime, and Humble Oil & Refining Co.'s No. 1-B State, C SW NW Section 29-21-36, is drilling at 3,480 feet in lime. Gypsy Oil Co.'s No. 2 Bell-Ramsey, C SW NW Section 9-21-36, is drilling at 3,400 feet in anhydrite, and Skelly Oil Co.'s No. 1 Coleman, C NW NW Section 17-21-36, is drilling at 3,403 feet in lime. The Shell-Devonian companies' No. 1 State, C SW NE Section 20-21-36, was deepened from 4,022 feet to 4,171 feet and water rose 2,700 feet in the hole in eight hours. There was 20 feet of oil on top of the water and swabbing is in progress. Tide Water Oil Co.'s No. 4 Coleman, C SE NE Section 17-21-36, cemented the 12½-inch at 62 feet with 40 sacks, and is waiting.

Maljamar Area

Maljamar Oil & Gas Co.'s No. 4 Baish, NE SE NE Section 21-17-32, is running high and looks promising. It is bottomed at 2,330 feet and killing a gas blowout. The tools were blown up the hole and the line broken. It encountered 100,000 feet of gas at 2,283 feet and the increase came at 2,330 feet.

Lea Area

The Texas Co.'s No. 4-A Lynch, C SE NE Section 34-20-34, is fishing for bit at 1,790 feet. It topped the anhydrite at 1,625 feet. Same company's No. 1 Elliott, C NE NE Section 22-20-34, is drilling at 1,150 feet in red beds and its No. 1 Swearingin, C NE SW Section 8-20-34, is drilling at 210 feet in red rock.

Big Eddy Area

Stanolind Oil & Gas Co.'s No. 1 Duncan, E SE SW Section 30-21-30, a wildcat on the Big Eddy anticline, is spudding.

Caprock Area

Vierson & Brown's No. 1 Robinson, C NW SE Section 14-11-32, Caprock district, northwest of the Hobbs Pool, is moving in materials.

Eddy County

The only completion in Eddy County was Pecos Valley Gas Co.'s No. 9 Vandagriff, SE SW SE Section 5-17-28, Artesia district, which gauged 1,050,000 feet from the pay at 1,325-40 feet. One new location is Flynn, Welch & Yates' No. 2 Story, C NE SW Section 30-19-30, a wildcat to the northeast of the Getty Pool. It is moving in machine. The location is a little less than 2 miles west of No. 31 Lane, a test drilled by Midwest Refining Co. in 1929 and abandoned at 2,002 feet. The Midwest well had shows of both oil and gas. A. & M. Petroleum Co.'s No. 1 State, SW NE Section 15-21-27, Carlsbad district, is drilling at 760 feet in anhydrite and lime. Leonard, Inc.'s No. 1 Robinson, C NE SW Sec-

Left to right: Bruce Clardy, head of the crude oil purchasing department of the Shell Petroleum Corp., Houston, Tex.; Les Stegall, pipe line scout for the Shell Petroleum Corp., and Whitey May, scout for the Texas Pipe Line Co. The latter two are from Tyler

tion 25-16-31, Maljamar area, is waiting for tubing at 4,365 feet.

Chaves County

Comanche Drilling Co.'s No. 1 Sloop-Purcell, NE cor. SE Section 10-11-26, Roswell district, is shut down at 150 feet, and C. J. Franks and others' No. 1 Roswell Insurance, NE cor. SE Section 30-11-25, is preparing to cement pipe at 981 feet. Roswell Oil Syndicate's No. 1 Hinkle, C NE SE Section 17-11-27, is testing at 835 feet. It had an oil show at 770 feet and 150,000 feet of gas at 817 feet.

De Baca County

Landowners Oil Co.'s No. 1 McAdoo, SW cor. NE Section 16-1s-27, Buffalo Creek, is reported abandoned, but not plugged at 5,860 feet.

San Miguel County

Cabra Springs Oil & Gas Co.'s No. 1 Jones, NW NE NW Section 6-11n-22e, South Pino Mesa, a first report, is moving in materials for a test to the Santa Rita sandstone at 950 feet. Same company's No. 1 West Pino Mesa, CWL Section 19-12-22, is shut down at 435 feet and will wait until No. 1 Jones is completed. Same company's No. 1 Cabra Springs ranch, SW NE NE Section 22-12-22, is fishing at 3,803 feet.

COLORADO

Archuleta County

Navajo Oil Co.'s No. 1 Crowley, SW cor. NE Section 11-32-1e. Chromo district, is waiting for 8¼-inch casing at 475 feet, and Oil City Petroleum Co.'s No. 2-X Garnett, Lot 3, SW Section 25-33-1e, Price district, is drilling at 675 feet.

Boulder County

Leslie R. Steele's No. 1 Cole, NW cor. NE Section 33-1n-70, Parallel Dome, is drilling at 2,930 feet and missed the sand expected at 2,850 feet. It appears to be drilling in a fault. The well is making enough gas to fire the boiler.

Routt County

Texas Co.'s No. 8 Quaintance-Hocking, NE SW NE Section 18-6n-86, Tow Creek, cemented the 8⅝-inch at 3,003 feet and is drilling at 3,050 feet.

Lincoln County

Consolidated Smelting & Metals Co.'s No. 1 Hancock, NW cor. SE Section 7-17-52, Haswell district, has rig completed and expects to begin spudding on November 10.

Prowers County

Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, is drilling in hard lime at 3,985 feet. A complete water shut-off was obtained at 3,862 feet with the 6⅝-inch.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Section 10-29-69, Oak View district, has more gas at 3,200 feet and is preparing to move back the boiler. Gas above this horizon was cased off at 3,050 feet with the 5½-inch. So far the hole has had no water.

Park County

South Park Oil Co.'s No. 1 State, SE cor. SW Section 16-11-75, Hartsel district, is drilling at 400 feet with shows of oil and gas.

Moffat County

Texas Co.'s No. 1 Van Schaick, SW cor. Section 19-12-100, Hiawatha district, reported a completion last week, gauged 13,000,000 feet a day after being allowed to blow and clean itself for 16 hours. Total depth is 2,148 feet and the pay was at 2,143-48 feet.

Stanolind Oil & Gas Co.'s No. 14-SD Parkinson, NE SW Section 22-4n-92, Iles Dome, is drilling at 2,821 feet.

WYOMING

Big Horn County

The Grass Creek Field, which has been running around 600 bbls. a day, is shut in for the winter. The field is operated by Ohio Oil Co. and Stanolind Oil & Gas Co. The black oil wells have been shut in for some time and only the light oil run. A test last July, after closing down for the winter of 1933-1934, is reported to have shown an increase of several hundred barrels a day after being idle for the winter. This indicated that the field, in spite of its age, is still capable of building up its production.

Ohio Oil Co.'s No. 2 Byron-Union, C SE NE Section 22-56-97, Byron Dome, was drilled to 5,503 feet and is plugging back to the Tensleep at 5,496 feet. The location is less than one-third of a mile south of the nearest producer.

Wyoming Oil & Refining Co. has released a location for its No. 1 Government, on the F. J. Evans permit, NE NE NW Section 12-49-91, on the Paintrock structure. The structure is held under permits from the Government by Roy Holloman and F. J. Evans, of Denver. It was first mapped in reconnaissance in 1915 by the U. S. Geological Survey and was later detailed by Mr. Holloman, a consulting geologist of Denver. As mapped, Paintrock is a northwest-southeast trending anticline about 9 miles long and 1½ to 2 miles wide and has at least 1,500 feet of closure. The oldest surface formation exposed along the crest is the Sundance. At the selected location the surface formation is Morrison and the well will start about 150 feet above the base of that formation. The objective is the Madison limestone, which at its outcrops in Wind River Canon is oil saturated through about 200 feet of the formation. Mr. Holloman estimates that a 3,100-foot well will test that formation. The nearest Madison production is on the Garland Dome, 40 miles north and west of Paintrock.

Taylor Oil Co.'s No. 1 Hoskins, SE SE Section 25-56-97, Byron district, is backing out drill stem at 5,276 feet, total depth. Peter Evanoff and others' No. 1 Griffin, Lot 60, Section 4-55-97, Garland Dome, is drilling at 980 feet. Jerome Drumheller's No. 1 Martin, SW SE NE Section 17-49-91, Manderson district, is running pipe to bottom at 815 feet to stop caving.

Albany County

California Co.'s No. 1 Holst, NE SE SE Section 13-17-77, Quealy Dome, is drilling at 2,987 feet.

Carbon County

Location for a deep test on the Medicine Bow structure has been released by Ohio Oil Co. in its No. 1 W. M. Kyle, NE SE NE Section 26-21-79, joint with the California Co. Materials are moving in. It will be drilled with rotary and the objective will be the Sundance at around 6,000 feet. The location is one-fourth of a mile northwest of a test drilled in 1923 by Southwestern Petroleum Co., NW cor. SW Section 25. This test had production in the top of the Muddy at 4,035 feet, but ran into water upon going deeper. It tested the Dakota and was abandoned. The new location was made on a seismograph survey.

Ohio Oil Co.'s No. 1 Morris, C NW SE Section 6-20-77, Diamond Dome, is burying water line for winter operations and preparing to resume at 2,874 feet. Argo Oil Co.'s No. 1 Government, NE cor. SE Section 5-24-87, O'Brien Springs, set the 15½-inch at 240 feet and is drilling at 500 feet. Sinclair-Wyoming Oil Co.'s No. 4 Wertz, SW cor. SE Section 7-26-89, Wertz Dome, is fishing for 2½-inch tools at 3,516 feet, which is probably the new bottom.

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is drilling at 5,707 feet in black shale with some dry sand. It is believed to be the Muddy. Same company's No. 1 Whitford, SW SE SE Section 24-20-84, is building derrick and laying 3 miles of water line from springs on the Stone ranch.

Converse County

John Ackard's No. 1 Daniels, SE Section 8-32-72, Brenning Basin, which has been idle for several months at 915 feet after running the 5½-inch pipe, has resumed and is drilling at 1,000 feet. Otto Olston and others' No. 1 Carey, Section 6-32-74, Box Elder Basin, which has been shut down at 501 feet since the fall of 1931, is resuming.

Hot Springs County

California Exploration Co.'s No. 1 Government, NE SE NE Section 12-44-97, Waugh structure, is drilling at 2,922 feet. It had a hole full of water at 2,755 feet.

Lincoln County

Senrab Oil Co.'s No. 3 Government, SE NW Section 10-26-113, LaBarge district, is drilling at 700 feet.

Sheridan County

Sheridan Syndicate's No. 1 Allison, SW SE Section 15-55-85, Beaver Creek, is drilling at 2,280 feet.

Niobrara County

Ed Shogren and others' No. 1 Olinger, E NE NW Section 1-36-63, Old Woman Creek, lost the hole at 1,070 feet and is skidding rig 150 feet to the west.

Natrona County

Sinclair-Wyoming Oil Co.'s No. 1-C, NE NW NW Section 12-39-79, Salt Creek Field, was deepened from 2,205 feet to 2,244 feet and recompleted in the second Wall Creek for 3 bbls. per

Government Royalty on Naphtha Output Will Be Increased on January 1, 1935

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Nov. 3.—Official figures of the petroleum and natural gas division of the Alberta lands and mines department at Edmonton show gross water-free oil produced from all Alberta fields in September totaled 102,038 bbls., compared with 101,011 bbls. in August.

Shareholders of Home Oil Co. met at Vancouver, British Columbia, on November 7 to consider the proposed sale of the company's acreage, producing wells and other interests in Section 20-19-2w5, South Turner Valley, to the Royalite Oil Co. The consideration is 20,000 shares of Royalite stock valued at $290,000 and the sale is approved by the Home Oil directors. It involves all the Home Oil interests in Turner Valley except the company's drilling equipment but does not affect the company's 25 per cent interest in Home Oil Distributors, a marketing organization operating in British Columbia.

Announcement has been made by Hon. Hugh Allan, minister of lands and mines for Alberta, that, commencing January 1, 1935, the government royalty on naphtha production will be increased from 5 to 10 per cent. In explaining the change the minister stated:

"At the time the natural resources were transferred to the province (October 1, 1930) the Dominion regulations provided that the royalty on naphtha production should be 5 per cent and that this should be increased to 10 per cent on January 1, 1935. These regulations were adopted by the Alberta government, and up until the present time, no change in the provision for an increase in the royalty has been considered by the government. This royalty collected by the government, of course, is only from lands leased by the government and it is worthy of note that on alienated lands which are leased by the producers from private individuals or corporations the royalties collected in many instances exceed 10 per cent."

It is estimated that the increased royalty will give the province a revenue from naphtha production of approximately $30,000 a month.

Mar Jon Section

In Section 28-18-2w5, South Turner Valley, Century Royalties' No. 1, LSD 14, is making up to 200 bbls. a day, with production steadily increasing as water in the formation is eliminated.

In the same section, Pacalta Oils' No. 1, LSD 7, is being finished with rotary equipment from Century's No. 1. Lost tools have been sidetracked and new hole is being made in the lime below 5,120 feet. Spooner Oils' No. 5 Anaconda, LSD 1, same section, has resumed after cementing casing in the top of the lime at 5,510 feet.

Carleton Royalties' No. 1, LSD 2, same section, encountered strong gas shows in the Dalhousie sand at 5,220 feet and is deepening below 5,291 feet. Renfrew Royalties' No. 1, LSD 3, is below 2,850 feet and logging satisfactorily with nearby producers. Publix Oil & Gas Co.'s No. 1, LSD 8, got a heavy gas flow in the Home sand and is below 4,450 feet with the lime looked for around 5,000 feet. British Dominion Oil & Development Corp.'s No. 4, LSD 6, is below 3,700 feet and close to the Blairmore formation.

In the northeast corner of the section, Director Royalties' No. 1, LSD 16, has finished a fishing job and is drilling below 4,550 feet.

South Turner Valley

On the east side, Nolan-Hungerford Royalties' No. 1 Rand, LSD 5, Section 34-18-2w5, is below 2,705 feet after getting the cardium marker at 2,450 feet. Merland Oil Co.'s No. 2, LSD 13, Section 27-18-2w5, got the Benton shale at 285 feet and is below 560 feet after setting 20-inch pipe.

On the west side, Associated Royalties' No. 1 Spray, LSD 5, Section 5-19-2w5, is fishing for 16-inch casing preparatory to resuming from 3,805 feet.

In the far south, Myers & Wright's No. 2 Pacalta, LSD 14, Section 21-18-2w5, is below 2,250 feet. Highwood Royalties' No. 1 Oliver, LSD 3, same section, is working on casing at 2,460 feet.

Central Turner Valley

In the Central Turner Valley Field, New McDougall-Segur Oil Co.'s No. 7, Section 12-20-3w5, has resumed after running casing to the top of the light crude sand at 3,600 feet. It has considerable crude oil in the hole.

New Test for South

Harold Ralphs and associates of Vancouver, British Columbia, are negotiating for 80 acres of the Okalta Oils, Ltd. holdings in Section 16-18-2w5. This acreage, originally taken up by W. S. Herron of Calgary, was turned in to Okalta Oils, Ltd., when the company was organized. Earlier in the year, Okalta's No. 6 was tentatively located in LSD 14, about a mile south of Highwood-Sarcee's No. 1 which is now the southernmost producer in the Turner Valley Field. The Ralphs Syndicate's holdings will be to the south and west of Okalta's No. 6 location.

Phillips' Wildcat

An important new wildcat is being started northwest of the Turner Valley Field where Phillips Petroleum's No. 1, LSD 16, Section 16-20-3w5, has derrick partly up. Location is west and north of Central Turner Valley production and west and a little south of North Turner Valley producers. Production in the latter area is limited to two wells of Model Oils, Ltd., in Section 22-20-3w5, and Foothills Oil & Gas Co.'s No. 1, in Section 26-20-3w5, diagonally northeast of Section 22. Section 16 is diagonally

(Continued on Next Page)

day pumping two hours a day. Same company's No. 5-F, NE SE NW Section 19-40-78, was deepened from 2,500 feet to 2,518 feet and recompleted, but has not been tested.

Park County

Dry Creek Oil Co.'s No. 1 Government, Lot 2, NE SW Section 9-50-100, in a fault block in South Oregon Basin, encountered the second Wall Creek at 1,151 feet and came in as a big gas well. The operator estimates it at 10,000,000 to 12,000,000 feet a day. Others place it at nearer 20,000,000 feet. The first Wall Creek, which gauged 14,000,000 feet a day, was cased off at 1,093 feet. The finding of gas in the second sand further proves the closure on the south and enhances the prospects for getting oil in lower horizons. The well was spotted by C. T. Lupton, well known Denver geologist, who has recommended to the operator that the test be carried deeper. Most of the structures in the Big Horn Basin are faulted and the discovery in this well will most likely result in a further increase in prospecting throughout the district. There are several tests now drilling in fault blocks in that district.

Garland Oil Co.'s No. 2 Government, SE NE NW Section 14-56-98, Garland Dome, has steel derrick completed and is preparing to resume at 60 feet where the 20-inch was cemented.

Val M. Kirk's No. 2 Kirk, SE SW SW Section 24-58-98, Frannie Dome, drilled to 2,794 feet, cemented the 8⅝-inch on top of the pay at 2,754 feet and is swabbing at the rate of 350 bbls. a day.

Sweetwater County

Sinclair-Wyoming Oil Co.'s No. 28-A, NW SE NE Section 10-26-90, Lost Soldier Field, was deepened to 655 feet and recompleted for an initial production of 1 bbl. of oil and 10 bbls. of water. Same company's No. 51-A, C SW SW Section 11-26-90, was plugged back from 565 feet to 516 feet and completed for 10 bbls. a day. Same company's No. 60, C SE SE Section 3-26-90, was deepened from 1,937 feet to 2,075 feet and plugged back to 1,905 feet and recompleted for 1 bbl. of oil and 1 bbl. of water a day, pumping two hours a day. Same company's No. 76, SW cor. NW Section 11-26-90, is drilling at 400 feet, and its No. 46-A, SE cor. Section 3-26-90, is drilling at 1,825 feet in shale.

Washakie County

Crist Oil Syndicate's No. 1, C SW SW Section 31-48-90, Hidden Dome, cemented the 10-inch at 80 feet and is drilling at 360 feet.

Weston County

Conway Oil Corp.'s No. 1 Government, C SE NW Section 7-41-60, Dewey district, ran the 10-inch through the Morrison to 750 feet.

Chadron-Osage Oil Co.'s No. 7 Albert Jones, CSL SW NE Section 21-46-63, Osage Field, was dry and abandoned at 650 feet, and its No. 8 Jones, SW cor. NE Section 21-46-63, has rig on location. La Fleishe Oil Co.'s No. 18 fee, C SW SW Section 17-46-63, is drilling at 300 feet, and Irene Eaton's No. 14, NE SW Section 30-46-63, is standing with 8¼-inch cemented at 460 feet.

MONTANA

Glacier County

One gas well and three oil wells were completed and one new location was released in the Cut Bank Field. Montana Power Gas Co.'s No. 1 De Zort Unit, 700 feet north of CSL Section 23-35-5w, was completed for 10,000,000 feet of gas a day at 2,776 feet from the pay at 2,753-75 feet. This well is on a unitized block.

Santa Rita Oil & Gas Co.'s No. 4 Tribal, C N half SW Section 15-35-6w, at the extreme northwestern edge of the developed area and inside the Blackfeet Indian Reservation, was completed at 2,934 feet and swabbed 310 bbls. the first 24 hours. The pay was found at 2,886-97 feet, 2,903-10 feet and 2,913-30 feet.

R. C. Tarrant's No. 1 State, SE SE Section 36-34-6w, a mile to the north of the town of Cut Bank, found the pay at 2,847-2,900 feet and was completed at 2,909 feet. Oil rose 1,500 feet in the hole, but it has not been tested.

Olive Oil Co.'s No. 2 Winkler, W NW NE Section 35-35-6w, had 1,500 feet of oil from the pay at 2,853-76 feet, but has not been tested. Total depth is 2,895 feet.

The new location is Lawler & Hoer's No. 1 Clarkson, C SW SW Section 9-33-5w, three-fourths of a mile to the east of Montana Power Gas Co.'s No. 1 De Zort gas well.

Consolidated Gas Co.'s No. 1 Tribal, E NE NE Section 34-35-6w, topped the Colorado at 555 feet and is drilling at 570 feet. Same company's No. 2 Tribal, NE SE NE Section 34-35-6w, is drilling at 375 feet. Fisk and others' No. 1 Harper, C NE NE Section 21-34-6w, is drilling at 2,100 feet.

Hannah-Porter Co.'s No. 2 Britton, SW NE NE Section 23-34-6w, is drilling at 2,700 feet.

Indian Oil Co.'s No. 1 Reickhoff, SW SE Section 3-34-6w, has cleaned up a fishing job and is making new hole at 2,050 feet, and its No. 2 Winkler, W SW SW Section 23-35-6w, pulled in derrick while fishing at 2,585 feet and will rebuild.

R. C. Jeffries' No. 1 Lukens, C SE SE Section 1-33-6w, is drilling at 2,570 feet.

Lawler & Hoer's No. 2 Harland, C NW NW Section 8-33-5w, is drilling at 2,760 feet and has a show of oil.

Montana Power Gas Co.'s No. 1 Gaines, C NW NE Section 6-33-5w, is running the 6⅝-inch at 2,768 feet.

R. C. Tarrant's No. 5 Haglund, Jr., C SW NE Section 13-34-6w, is drilling at 2,350 feet, and his No. 3 Miller, E NE NE Section 24-34-6w, is drilling at 1,725 feet. Texas Co.'s No. 1 Kneale, C SW NW Section 14-35-6w, is standing with the 7-inch cemented at 2,860 feet, and its No. 5 Purdy, E NW NW Section 35-35-6w, is drilling at 2,632 feet.

Watson and others' No. 1 Simero, NE SW NE Section 1-33-6w, is drilling at 2,700 feet.

Carbon County

Ohio Oil Co.'s No. 14 Maddox, C NW NW Section 10-7-21, on the northwestern flank of Dry Creek, plugged back from the Lakota at 6,104 feet to the Dakota at 5,950 feet and is testing.

Petroleum County

Guy Smith and others' No. 3, NE SE SW Section 33-14-26, Flatwillow district, is drilling at 368 feet.

Stillwater County

Continental Oil Co.'s No. 1 Orr, SW NW SE Section 18-5s-17, Dean-Ingersoll district, is drilling at 2,663 feet. It cored sandy shale at 2,640-54 feet, which may be the top of the Kootenai.

Teton County

Ned Cheadle and others' No. 1 Balsinger, NE SE NW Section 20-27-5w, West Pondera, is drilling at 2,475 feet in caprock on top of the Ellis.

Toole County

T. P. Kyle's No. 1 Clark, SW cor. SE Section 19-37-1e, Bow and Arrow district, is drilling at 410 feet. One new operation in the Kevin-Sunburst Field is the Kesun Oil Co.'s No. 1 Stewart, NW NE NE Section 25-35-3w, which is drilling at 800 feet, an offset to a recent completion.

UTAH

Mountain Fuel Supply Co.'s No. 2 Murphy, NE NE Section 21-3n-24, Clay Basin, Daggett County, is drilling at 5,676 feet in the second bench of the Dakota with nothing showing. It had 12,000,000 feet of wet gas in the first Dakota.

Ramsey Petroleum Corp.'s No. 1 Senior, SW NE SW Section 13-26-7e, Last Chance district, Emery County, which shut down for orders after encountering 21,000,000 feet of gas a day at 2,742 feet, will be drilled deeper in search of oil.

Canadian Fields

(Continued from Preceding Page)

southwest of Section 22. Model's No. 1, in the latter section, one of the steadiest and most consistent producers, yields light crude oil from the Madison instead of naphtha, with only a small wet gas production. South and west of the Phillips location is the Waite Valley structure where extensive wildcatting was done about five years ago. Phillips' No. 1 will be drilled with standard equipment, gas from the Model wells being used for fuel.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, LSD 12, Section 13-31-10w5, is below 4,186 feet.

On the Monarch structure tentative arrangements have been made for resumption of Cartier-Majestic's No. 1, LSD 3, Section 36-31-7w5, standing for two years at 1,460 feet. Oil shows were reported at 910 feet and 1,060 feet and Montreal interests are negotiating to complete the well.

Northwest of Cochrane, several geological parties are at work on the Grease Creek structure. Original filings by the Burns-Lee-Bushner Syndicate are held by Imperial Oil, Ltd., under a drilling agreement, but since this agreement the syndicate has filed on additional acreage as have other operators.

On the Aldersyde structure east of Turner Valley, Ranchmen's Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-28w4, has cleaned out and is running casing to bottom at 6,265 feet before drilling into the potential oil sand.

In the old Oil City Field, Waterton Lakes Park, Oil City Royalties' No. 1 Patrick, Section 30-1-30w4, is below 2,060 feet.

Border Fields

In the Alberta border areas, Franco Oils' No. 1, LSD 6, Section 5-3-25w4, on the Cardston structure, is below 260 feet. Dr. F. F. Hintze, geologist, of Salt Lake City, who located the test, believes oil as well as gas may be found though the drilling is primarily for gas to be marketed to Cardston by the Cardston Gas & Development Co. The structure is southwest of Cardston and a few miles north of the boundary, and plans for a test were made some years ago by the late Charles Woods of Parco and, R. G. Taylor of Denver. They were unable to block the acreage solidly so the project was dropped. The present company was organized originally by Mr. Woods. John Reynolds of Great Falls, a poineer of the Bow Island gas field, is also interested. Officers are: President, J. S. Smith, Cardston; vice president and managing director, Walter F. Thorn, Moose Jaw, Saskatchewan; directors, J. Y. Card, B. Y. Williams, Rulon E. Hicken, all of Cardston; geologist, Dr. F. F. Hintze, Salt Lake City; superintendent, W. C. Thorn, Moose Jaw; engineer, George Mackie, Moose Jaw.

In the Alberta end of the Red Coulee Field, Vanalta's No. 6, LSD 3, Section 4-1-16w4, has set 6-inch casing near the top of the sand and is ready to drill in.

On the Rogers-Imperial structure east of Coutts, Range Oil & Gas Co. of Calgary is planning further development work. Robert Wilkinson, managing director, accompanied by J. E. Collins, secretary and H. H. Granger and A. A. Nicas, directors, visited the field recently. Range's No. 1 gasser, LSD 9, Section 29-1-11w4, completed several years ago in the Madison lime at 2,797 feet, got production in four horizons including one just above the Ellis-Madison contact at 2,708 feet. It was the biggest gasser ever drilled in Alberta, with initial flow estimated as high as 65,000,000 feet a day. At the recent visit it was tested, showing 800 pounds rock pressure and open flow of 43,000,000 feet. No decline in pressure was noted and there was no evidence of water intrusion. In 1931 a geophysical survey of the field furnished additional information on the basis of which the further locations are being made.

On the Comrey structure in the southeastern part of Alberta, Comrey Oil Co.'s No. 1, Section 9-1-5w4, is shut down at 180 feet.

Saskatchewan Test

In Saskatchewan, Pine River Petroleums' No. 1, LSD 8, Section 23-12-24w2, on the Dirt Hills structure 50 miles southwest of Regina, has been definitely abandoned. It was started last year with the backing of Highwood-Sarcee Oils, Ltd., of Calgary, the Pine River company being a subsidiary. Drilling was stopped at 4,365 feet, after establishing a new depth record for the

HEILAND RESEARCH CORPORATION

LICENSED GEOPHYSICAL ENGINEERS

CLUB BLDG. DENVER, COLO.

William M. Barret, Inc.

Consulting Geophysicists

Specializing in Magnetic Surveys

Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.

GIDDENS-LANE BUILDING -:- SHREVEPORT, LA.

province. Gas sands at 1,385 feet and 1,625 feet were tested but failed to develop commercial production.

East Central Alberta

In East Central Alberta, fresh activity in oil and gas drilling is anticipated next spring. There has been heavy purchasing of freehold rights, particularly in the Kinsella Field about 90 miles east of Edmonton where some 15,000 acres have been tied up. Further drilling and refining activities are also forecast for the Wainwright Field.

Drilling in Ontario

In the Hepworth area in Bruce County, Ontario, a test drilled by A. B. Holmes and associates of Toronto has encountered a good flow of gas in the Trenton limestone around 1,400 feet. Two other tests are to be drilled.

In the Eden Field, Norfolk County, Charles Simpson and associates of Simcoe, are starting No. 1 on the Anderson farm, Bayham Township. Dave Wright of Sarnia has the contract. Further east, Middleton & Norfolk Gas Co.'s No. 1 (Bay Sunday), Lot 5, Concession 3, North Talbot Road, Middleton Township, is below 900 feet after shutting off a strong flow of sulphur water. Midwal Oil & Gas Co.'s No. 1, Lot 2, Concession 3, Middleton Township, is ready to spud. E. P. Rowe's No. 2, Charles Coyle farm, is drilling. E. P. Rowe's No. 4 Stillwell has been abandoned after a shot. E. P. Rowe's No. 5 Stillwell is drilling.

The Walters Syndicate of Buffalo is drilling for gas in Norfolk County, 3 miles east of Simcoe, with Charles Simpson of Simcoe in charge.

In the Dover Field, Kent County, Medina Natural Gas Co.'s No. 1 is starting on the Sterling lease, west of the No. 1 Stover gasser. William Stubble has the contract. F. H. Stover's No. 2, Sam Antaya farm, is drilling. Ajax Oil & Gas Co.'s No. 9, Johnston farm, is drilling.

In the Tilbury Field, Kent County, Ladd & Cabana's No. 1, Gifford farm, about 2,500 feet from Ladd & Ziegen's No. 1 gasser in Concession 14, Tilbury East, has spudded. In the De Clute Field, Union Gas Co.'s No. 25, SE Lot 17, Concession 15, Raleigh Township, is below 300 feet. Gas Producers Syndicate's No. 1, Gilbert Pardo farm, Raleigh Township, 2½ miles west of Cedar Springs, is below 1,000 feet after finishing a fishing job.

South Brooke Operations

Following the slowing down of drilling operations in the central and northern sections of Brooke Township, Lambton County, there has been a renewal of activity in the south end of the township. Recently a Buffalo syndicate moved a drilling outfit to the Ed Mills farm, Concession 3, Brooke Township, and it is now below 300 feet and expected to get the sand in about a week. Mr. Kay, an experienced foreign driller, is in charge, with Gordon Bowie of Warwick.

★

DUCTILITY

★

Perfectly welded pipe that can be readily shaped for any job without loss of tensile properties...that's

ALLEGHENY STEEL PIPE

★

Allegheny Steel Co.

BRACKENRIDGE, PA.

Sales Offices and Warehouse Stocks in the Principal Cities

ALLEGHENY PRODUCTS: SHEETS FOR AUTOMOBILE BODIES, METALLIC FURNITURE, DEEP DRAWING—ALLEGHENY METAL —ALLEGHENY ALLOYS—ELECTRICAL SHEETS—STEEL CASTINGS—SEAMLESS TUBING—BOILER TUBES—PIPE.

Central West Fields

(Continued from Page 56)

Frank Russell is drilling No. 13 on the Cozzins-Martin farm, Section 14, and Martin Brothers are drilling No. 22 on the Ella Martin farm, Lot 1,078, Palmer Township.

In Ashland County, the Kenova Oil & Gas Co.'s No. 1 on the Floyd Eagle farm, Section 9, Mohican Township, is a 10-bbl. initial producer. Robison & Arn are drilling No. 2 J. W. Eagle farm, Section 14, same township.

In Medina County, the Ohio Fuel Gas Co.'s No. 1 John Grabis farm, Section 18, Lafayette Township, is a gas well at 3,141 feet. In Homer Township, Ohio Fuel Gas Co. has a location for a test on the Glen A. McFarren farm, Section 7, and also is drilling No. 1 David E. Pike farm, Section 6, same township. Same company is drilling No. 1 John D. Damley farm, Lot 45, Medina Township, and it has a location for No. 1 F. F. Kovar farm, Lot 40, Hinckley Township, same county.

In Cuyahoga County, McMillan's test on the Leon Crawford farm, Lot 31, Olmstead Township, is a gas well.

In Holmes County, Ohio Fuel Gas Co. has a rig in for No. 1 Elnora Butler farm, Section 11, Richland Township, and a location made for the same company on the Charles McFarland farm, same section and township. In Monroe Township, Ohio Fuel Gas Co. is drilling No. 1 Birt B. Finney farm, Section 26; No. 1 Willard Parsons farm, Section 5, same township, and No. 1 Clarence Connor farm, Section 32, Ripley Township, same county.

In Richland County, Ohio Fuel Gas Co. is drilling No. 1 on the L. C. Benedict farm, Section 1, Worthington Township.

In Wayne County, Ohio Salt Co. is drilling below 3,125 feet on the Salt company's property, Section 12, Chippewa Township, and also is drilling a test on its own property, Section 12, Milton Township, same county. Harmon & George are drilling No. 4 Henry Haggerman farm, Section 20, Chester Township, and the Ohio Fuel Gas Co. has a rig in for No. 1 on the W. F. Berry farm, Section 12, Congress Township, same county.

In Fairfield County, City Natural Gas Works has a rig up for No. 1 on the Mertz and Moyer farm, Section 14, Pleasants Township, same county, and has a rig up for No. 2 on the M. E. Bowman farm, Section 34, Rome Township, same county.

In Coshocton County, Ira Hazlett's No. 3 on the Glen Meek farm, Section 1, Washington Township, is a gas well at 885 feet.

In Licking County the Blue Rock Oil Co.'s No. 10 on the Samuel Mossholder farm, Section 13, Fallsburg Township, produced 15 bbls. at 3,101 feet. Everett Gas Co. is drilling No. 6 on the Felix Claypool farm, Section 7, Hanover Township, same county.

In Muskingum County, E. J. Edman is drilling No. 2 Price B. Spencer farm, Section 3, Muskingum Township.

In Stark County, Johnson and others' No. 1 Sam Keller farm, Section 22, Perry Township, is a dry hole.

Five gas wells were finished in the Guernsey County Field, as follows: The Four Leaf Clover Oil & Gas Co.'s No. 2 on the John R. Sanger tract, Section 11, in Wheeling Township, depth of 1,250 feet; George Jewell's No. 2 Fannie and Nathan Bay farm, Section 35, Oxford Township, depth of 1,296 feet; Ohio Fuel Gas Co.'s No. 2 William W. Woodburn farm, Section 21, Willis Township, at 1,490 feet; same company's No. 2 J. L. Lent, Section 22, Willis Township, at 1,355 feet, and Ferguson & McCullough's initial venture on the Francis R. Foraker lease, Section 2, Willis Township, at 1,362 feet.

In Meigs County, the Ohio Fuel Gas Co. has staked location in Section 3, Rutland Township, and a rig will be moved onto this site immediately. The Ohio Oil Co. has also staked locations on the S. M. Cross tract, in Section 30, Lebanon Township, and at the Arthur Lovell farm, Section 25, Lebanon Township.

KENTUCKY

There were 13 wells completed in Ohio County, Kentucky, nine being oil wells with an initial production of 425 bbls., and four were dry holes. The best of the wells was Vickers and others' No. 10 on the Sally Jones 50 acres, in the Oak Station Pool, which produced an initial of 125 bbls. Carpenter and others' No. 3 on the C. Petty farm, in the same pool, was good for 20 bbls. The Petroleum Co.'s No. 8 on the Sally Jones farm produced an initial of 50 bbls., and Lowman and others' No. 1 C. Duff farm, was light, being good for 15 bbls.

In the Roberts Pool, in Ohio County, Snowden-McSweeney's No. 13 on the G. E. Fuqua farm produced 45 bbls. initial. Cumberland Petroleum Co.'s No. 11 on the Sidney Lancaster farm produced 60 bbls. initial, and Stewart & Gealy's No. 10 on the J. H. Roberts farm, same pool, produced 20 bbls. initial. Mark-Bell and others' No. 8 on the Charles Wedding farm, and the same company's No. 9 on the same farm produced 40 bbls. initial.

In the Fordsville area in Ohio County, Pointer and others' No. 1 on the Wavey Smith farm was a dry hole, and Charles E. Armstead found a dry hole in No. 4 on the Arnold Newton farm, in the Fordsville area.

East of Ellmitch, W. E. Hupp and others drilled a dry hole in No. 2 on the K. C. Rowe farm, and the same parties hit a dry hole in No. 1 on the Matthews farm.

In Hancock County, in the Matthews Pool, W. E. Hupp and others are drilling No. 3 Dan Burke farm, also No. 11 on the Preston Matthews farm. The Petroleum Co. is drilling No. 3 on the W. Bailey farm, and Joseph B. Mayer is drilling Nos. 9 and 10 on the Grove Pool lease, and also drilling No. 10 on the J. W. Matthews farm.

In McLean County, Cameron & Thompson are drilling No. 5 on the Will Ashton farm. In Haywood County, R. R. Henderson is drilling No. 2 on the Jarrett farm, 5 miles from Brownwood.

In Allen County, R. E. Jolly is reported drilling No. 13 on the O. M. Stringle farm, in the Scottsville Field. N. B. Phillips is drilling No. 14 on the Gibson lot, same county, and Ross Works is drilling No. 1 on the Tonville Smith farm, in the Half Way Field, same county.

ELECTRIC POWER CLUB

The annual meeting of the Petroleum Electric Power Club is scheduled to be held in Beaumont, Tex., December 4, 5 and 6. This club is composed of men interested in the distribution of electric power to the petroleum industry and it is anticipated that members will attend this meeting from all portions of the Mid-Continent and Gulf Coast areas as well as from many more distant points.

GEORGE MORRISON DIES

PETROLIA, Ontario, Nov. 3.—Word was received here recently of the death at Adelaide, South Australia, of George Morrison. Formerly widely known as an oil driller in the Ontario fields, Mr. Morrison left Petrolia for Australia in 1888 with a party of drillers and has made his home there since.

GEORGE McMILLAN DIES

George McMillan, active in the development of the Cushing oil field, died at Bristow, Okla., last week at the age of 67 after a lingering illness. A native of Corinth, Miss., he moved to Muskogee, in 1901, and to Bristow six years later.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Yield and Composition of Gas Made From Shale

What is considered a good yield of gas from shale? Could you give us an analysis of representative shale gas as commercially manufactured? —L. M. E.

There are several conditions that have to do with the volume and composition of the gas that may be made from shale, the most important being the kind of shale and the temperature of retorting. A. W. Nash has described the gases obtained from certain shales in the Journal of the Institution of Petroleum Technologists, 84, 626; 1930. The material following is from this article.

The employment of steam in the retorting process, a practice which originated with the Scottish shale industry, was found to serve numerous purposes. In modern Scottish practice the shale is first retorted at a moderate temperature (900° F.) and then passes to a zone of higher temperature (maximum of 1,800° F.), where steam enters the retort. Not only does this effect an economy in heat, since the steam is superheated by contact with the spent shale which it itself cooled, but also a more efficient distribution of heat is insured. At the same time, at the temperature obtaining in the lower part of the retort, the steam reacts with the carbon in the spent shale according to the equations:

$$C + H_2O = CO + H_2$$
$$C + 2H_2O = CO_2 + 2H_2$$

The gaseous products of retorting are thus distilled by the addition of large volumes of hydrogen and oxides of carbon, though the calorific value of the gas is at the same time reduced.

The steaming process was extremely valuable to the Scottish industry because the yield of ammonia was thereby vastly increased while the oil quality was improved, since cracking of the oil in the retort was reduced by the presence of steam.

The normal Scottish practice gives about 9,800 cubic feet of gas per ton of shale, a typical analysis being as follows:

Composition of Shale Gas

	Per cent
H_2S	trace
CO_2	20.0
CO	4.3
H_2	34.2
C_nH_{2n}	3.1
CH_4	10.8
O_2	5.1
N_2	22.5

Calorific value 302.5 B.t.u. per cu. ft. (gross) or 271.4 B.t.u. per cu. ft. (net).

It may be said that dry distillation of shales and torbanites up to about 700° C. (1,292° F.) gives rise to moderate quantities of gas of a high calorific value and containing large amounts of gaseous hydrocarbons. The yield and quality of the gas is increased at the expense of the oil yield in cases where the oil vapors are cracked by coming in contact with hot surfaces, i.e., in badly designed retorts. The use of steam increases the yield of gas, at the same time reducing its calorific value owing to dilution with hydrogen and oxides of carbon. The high temperature carbonization process gives rise almost exclusively to gaseous products. In certain internally heated and producer type retorts, large quantities of low calorific value gas are obtained containing high proportions of nitrogen and oxides of carbon.

Cracked Kerosene Requires More Treatment Than Straightrun

In what way do the kerosenes made from the cracked distillates differ from the straightrun kerosenes? Why do they have to be treated with so much more acid?—P. H.

The distillate from the cracking operation, called pressure distillate, may be considered as synthetic crude oil. That is, it is necessary to distill this pressure distillate in a similar manner to that used for the separation of the primary products from the crude oil, and the distillates obtained have to pass through purification processes which in principle are the same as when the straightrun gasoline and kerosene are derived from the crude oil. During the cracking of the oil charged to the pressure still substances are formed that are quite different from those found in the distillates from crude oil, and it is these that complicate the purification treatment.

The straightrun kerosenes are usually composed of saturated paraffin hydrocarbons, with but small traces of unsaturated hydrocarbons and objectionable impurities. The cracked kerosenes are recognized by the high percentage of both unsaturated compounds and aromatic compounds that are present, and especially the large proportions of gums, color forming bodies, and sulphur compounds. If these were not removed the kerosene would not be suitable for burning in lamps and stoves.

Some refiners make a practice of adding enough acid when treating the pressure distillate, before redistillation, to include removal of impurities from the kerosene fraction in addition to those contained, in lesser quantities, in the gasoline fraction. Many kerosene fractions from crude oil do not require any acid treatment but treatment with sulphuric acid and redistillation is the usual practice when cracked kerosene is to be marketed as an illuminating oil.

Sachanen and Tilicheyev, in their book of Chemistry of Cracking, report the details of experiments with straightrun and cracked kerosenes of the same boiling range. The table on page 234 is reproduced, in part.

PROPERTIES OF STRAIGHTRUN AND CRACKED KEROSENE

Kerosene fraction—	Sp. gr., at 15° C.	Aniline point °C.	Iodine No.	Resins, per cent
Straightrun from mixed base crude oil	0.806	68.6	0.35	2.5
Cracked from fuel oil from same crude oil	0.819	56.4	61.44	10.0

The authors simply refer to the kerosene fractions so it is presumed that they have not been treated. It appears that the cracked product would have to undergo heavy acid treatment to produce a commercial kerosene.

Natural Asphalts Are Usually Unrefined Minerals

Can you furnish a brief description of raw or natural asphalts as distinguished from the petroleum asphalts?—T. L. E.

The distinguishing characteristic of the natural asphalts is that they usually require purification before they can be used. A good brief description is that which has been proposed by the League of Nations for tariff purposes. A special committee of the League has suggested the following:

Asphalts belong to the group of natural bitumens, which include mixtures of hydrocarbides formed naturally such as crude petroleum. Asphalts have a solid or practically solid consistency; they melt more or less easily, without having a clearly defined melting point, and they gradually harden on cooling; they do not crystallize but form amorphous black masses; sometimes when broken, they present a conchoidal structure.

Sub-item (a) consists of asphaltic rocks, such as calcareous asphaltic rocks from the Val de Travers, Syracuse, Ragusa, Seyssel and Bastennes, and also sandstone in stony or sandy masses impregnated with asphalt.

To asphaltic rocks have been assimilated bituminous schists in form of rocks, the bitumen content of which is not asphaltic and which are used as fuel or for the extraction of mineral oil. Their bitumen differs from asphaltic bitumen in that it is insoluble in organic solvents, is brown in color and contains saponifiable substances, whereas asphaltic bitumen is completely soluble and black in color. As bituminous schists (such as torbanites from Scotland, schists from Bruxiere, Kuckerite from the Baltic countries, Swedish aluminous schists, etc.) do not play an important part in foreign trade, it was not considered necessary to devote a special item to them.

Sub-item (b) is reserved for natural asphalts in other forms, particularly in the form of maltha; they include, inter alia, asphalts from Trinidad, the Dead Sea, the Bermudas and Maracaibo, Santa Barbara in California, and also asphaltites, such as gilsonite from Colorado and Utah, which are chiefly used for the preparation of black varnishes, while asphaltic rocks and other asphalts are mainly used for road-making. Since asphalts found in other forms than asphaltic rocks are often of a very pure type, refined asphalts have been placed with them. The latter mainly differ from crude asphalts in that the water and stony and earthy substances have been extracted.

Ethane and Other Hydrocarbons Decompose at High Temperature

What products may be expected to be obtained when ethane is heated above the cracking point? This is without pressure.—D. E. R.

The compounds produced from a hydrocarbon of the paraffin group under conditions of high temperature will depend upon the length of the molecule, so when a simple compound, such as ethane, is under consideration there can not be the multiple of substances formed as when a much more complex hydrocarbon is subjected to the same temperature.

Carbon, hydrogen and other hydrocarbons may always be expected to be found when a hydrocarbon is heated, and in the case of ethane it may be possible to produce the lower hydrocarbon, methane, together with carbon and hydrogen. When the change does not go to the point of forming carbon there will probably be some methane, ethylene and hydrogen obtained as the yield products.

The views of Bone and Coward, Jour. Chem. Soc. 93, 1,197, 1,908, are that both methylene and ethylene may be formed, when treating ethane at high temperatures, as temporary products. According to Hurd, in The Pyrolysis of Carbon Compounds, page 53, the same theory is also applicable to the pyrolysis of ethylene and acetylene. The residues CH_2, HC and possibly CH_3, which are considered to be formed by direct rupture of the carbon-to-carbon bonds in ethylene, acetylene and ethane, respectively, are of fundamental importance, but in the case of ethane and ethylene it is considered that the primary effect of high temperature is one of dehydrogenation. "The residues, or radicals, are formed concurrently. There are three ways for the residues to terminate their fugitive existence. They may become dehydrogenated further into carbon and hydrogen; they may unite with themselves; or, because of a hydrogen-rich atmosphere, they may accept hydrogen to form methane. Bone and Coward point out that this theory, which postulates radicals capable of hydrogenation, is the only one which can explain the existence of such large amounts of methane from ethane, ethylene and acetylene as are actually observed in practice."

As example is given by Hurd where a sample of ethane of the following percentage composition—ethane, 83.2; methane, 15.2, and nitrogen, 1.6—was heated at 650° C. The gaseous mixture contained unsaturated hydrocarbons, 6.5 per cent; hydrogen, 6.5 per cent; methane, 15.2, and the remainder ethane and nitrogen. Pease is reported to have found that the equilibrium ethane to ethylene and hydrogen corresponds to 17.5 dissociation at a temperature of 600° C. and 1 atmosphere pressure; 27.5 per cent at 650° and 1 atmosphere; and 41 per cent at 700° and 1 atmosphere.

PERSONAL PARAGRAPHS

MR. and MRS. GROVER CROSBIE and daughter JANE, left Petrolia, Ontario, recently for Negritos, Peru.

* * *

E. H. ESTILL, of the credit department of the Union Oil Company, has been appointed assistant secretary of the company which has headquarters in Los Angeles, Calif.

* * *

A. B. HOWARD, of Boise, Idaho, and JOHN BOYD of Idaho Falls, Idaho, general manager and chief geologist, respectively, of the Wasatch Petroleum Company, were in Casper, Wyo., checking petroleum possibilities in Central Wyoming.

* * *

BRUCE SULLIVAN, of Denver, Colo., organizer and general manager of the Colorado-Midland Refineries, Inc., is beginning to become active again after a severe automobile accident in which he had a number of ribs fractured and was in a hospital for several weeks.

* * *

A. J. EDWARDS, Tulsa salesman for Black, Sivalls & Bryson, Inc., has been promoted to the position of general sales manager, effective November 1. Mr. Edwards will continue to make his headquarters in Tulsa, and DONALD T. ORR, formerly of Oklahoma City, Okla., is moving to Tulsa to act as city salesman. JACK JOHNSON, another Tulsa salesman, continues in Tulsa in that capacity.

* * *

A. J. STEELMAN, of Denver, Colo., with the Ethyl Gasoline Corporation, was in Casper, Wyo., last week.

* * *

W. R. BOYD, JR., executive vice president of the American Petroleum Institute, was in Washington, D. C., on business for several days.

* * *

RALPH ZOOK, of Sloan & Zook, Bradford, Pa., was in Washington, D. C., for a couple of days on business with the Planning and Coordination Committee.

* * *

RAYMOND RUSSELL, with the Phoenix Refining Company at San Antonio, Tex., was a business visitor to Houston, Tex., during the past week.

* * *

V. H. HUGHES, consulting geologist, who has spent the last months at Ellis, Kans., for different operators, has returned to his home in Tulsa.

* * *

JOHN B. STEELE, Mid-Continent manager of the Kewanee Oil & Gas Company, with MRS. STEELE, has returned from a two weeks' vacation at Hot Springs, Ark.

* * *

HERBERT B. SMITH, vice president of Sinclair Prairie Oil Company, who has been quite ill and suffered an abdominal operation in the summer, has returned to his desk.

* * *

A. W. HEDEN, credit manager of the Sinclair Refining Company at Atlanta, Ga., was a business visitor to the company's headquarters at Houston, Tex., the past week.

* * *

HARRY WILSON, purchasing agent, Superior Oil Company, together with his family, has returned to Tulsa from a vacation trip to Kentucky, where he visited relatives, and also to other points in the South.

DEWEY T. ROSS, of Tyler, Tex., is undergoing treatment at a Topeka, Kans., hospital.

* * *

E. W. KRAMPERT, Casper, Wyo., geologist, was called to Great Falls, Mont., on business.

* * *

HARRY C. POTTS, vice president, Kerotest Manufacturing Company, Pittsburgh, Pa., is spending 10 days in Tulsa with SHEP F. MIERS, sales representative of the company.

* * *

H. C. HANNA, of the Standard Oil Company, has returned to his office at El Segundo, Calif., following a business trip to the main office of the company in San Francisco.

* * *

C. E. DOBBIN and CARL WALTER, geologists of Denver, Colo., were in Casper, Wyo., securing well logs on Byron and Garland structures and other oil and gas data.

* * *

W. H. EDELMAN, of Sheridan, Wyo., was in Casper, Wyo., the past week on his way home from a visit with his daughter in Torrington, Wyo. He was accompanied by MRS. EDELMAN.

* * *

G. D. HOBSON, of the Royal School of Mines, London, England, has been awarded the Institution of Petroleum Technologists' Students' Medal and Prize for 1934, for his paper on "Some Viscosity Measurements of Clay Suspensions."

MR. and MRS. LIONEL CHARLESWORTH, of Colombia, South America, are visiting the former's parents in Ottawa, Ontario.

* * *

MR. and MRS. R. M. WHITESIDE, Tulsa, announce the birth of a boy, October 16. Mr. Whiteside is a geologist with the Shell Petroleum Corporation, in Tulsa.

* * *

MISS JEAN BOGGS, of Cobourg, Ontario, has returned to Canada after spending two months with her parents, MR. and MRS. DESMOND BOGGS, in Negritos, Peru.

* * *

MAX W. BALL, geologist and petroleum engineer, of Denver, Colo., visited Alberta recently in connection with proposed development of tar sand deposits in the McMurray area.

* * *

HAROLD RALPHS, representing Vancouver, British Columbia, interests, visited Calgary recently in connection with projected development work in a new extension of the South Turner Valley Field.

* * *

THOMAS M. GALEY and DONALD E. COUTY, producers in western Kentucky, and joint owners of a skimming plant to be established in Fordsville, Ky., were on a business trip in the Mid-Continent area last week, visiting Tulsa and Nowata, Okla., and Independence, Kans.

* * *

TOM MOORE, of Tulsa, with the Drift Meter Company, was a visitor in Casper, Wyo., last week.

* * *

JOHN LYTELL, sales representative, Frick-Reid Supply Corporation, Tulsa, has returned from a visit with relatives at Pittsburgh, Pa.

* * *

E. W. WHEATON, of the A. W. Wheaton Brass Works, Newark, N. J., called on oil company purchasing agents in Tulsa last week.

* * *

THOMAS N. HUNTLEY, sales representative, General Refractories Company, Pittsburgh, Pa., has arrived in Tulsa to take up his residence.

* * *

E. H. SALRIN, vice president of the Tide Water Oil Company, with headquarters at Houston, Tex., has returned from a two weeks' business trip to New York.

* * *

W. B. ROYER, in the land department of the Tide Water Oil Company at Houston, Tex., has returned from a two weeks' vacation spent in California.

* * *

W. L. (BERT) CHILDS, vice president and general manager of the Reed Roller Bit Company, Houston, Tex., has several horses now showing in the Dallas horse show.

* * *

GEORGE SHOWALTER, division superintendent of production of the Mid-Continent Petroleum Corporation, who has been in California and Arizona for his health, has returned home fully recovered.

* * *

M. W. RICHARDSON, well known throughout the Mid-Continent as a broker of refinery products, was injured slightly Sunday near Okmulgee, Okla., when his car collided with another. Mr. Richardson was on his way from Tulsa to Gladewater, Tex.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

November 7, 1909

Tulsa County citizens have voted favorably on a $700,000 bond issue, for the purpose of erecting a court house in Tulsa.

Benjamin Andrews, well known Texas and Louisiana oil operator, was married recently to Miss Estelle Fuller Cunningham in New York City, and they are making their home in the Rice Hotel in Houston, Tex.

Producers are completing wells as high as 1,000 bbls. in initial production in the Hamilton Switch Pool in Okmulgee County, Oklahoma.

The directors of the new Oklahoma Pipe Line Co. are James A. Moffett, H. C. Folger, Jr., James E. O'Neil, D. C. Stewart, and John L. Havice. D. C. Stewart will be general manager; John R. Manion, superintendent of the Arkansas division, and John L. Havice manager of the Muskogee headquarters of the company. It is believed the charter of the company will be approved in a few days. It is expected that oil will be running through the line by March 1, 1910.

20 Years Ago

November 5, 1914

Rev. J. M. Critchlow, one of the discoverers of the Healdton Field in Oklahoma, and made wealthy by his discovery, has caused Sunday observance on his leases and has engaged an evangelist for six months to do religious missionary work through the Oklahoma oil country. The Reverned Critchlow will defray all the expenses of the mission.

The U. S. Bureau of Mines figures that the average value of the crude oil produced in the United States in 1913 was 95.4 cents per barrel an increase of 11.44 cents over the average price in 1912. California ranked first in production, Oklahoma second and Illinois third, in both years. Texas ranked seventh.

10 Years Ago

November 6, 1924

The National Research Council at Washington, D. C., is organizing a committee on petroleum research with Dr. Benjamin T. Brooks as chairman.

T. B. Slick opens a pool in the township north of the Rainbow Bend Pool in Cowley County, Kansas. The discovery well made close to 1,000 barrels initially.

The most southerly oil-producing well in the United States is the new well of Henne, Winch & Farris on the Martinez land in Jim Hogg County, Texas. It was good for 750 barrels initially.

Crude oil storage in the United States amounts to 500,000,000 barrels and, according to "The Lamp," it costs $150,000,000 per year to carry this crude aboveground.

C. B. WATSON, of the Pure Oil Company, was in Washington, D. C., for several days attending the meetings of the Refinery Board of Review, of which he is a member.

• • •

ELLIOTT COWDEN, Midland, Tex., owner of the acreage under the Cowden Pool in Ector County, and family, have been interested spectators at the horse races being held at Arlington Downs, Texas.

• • •

CHARLES BUERGER, of the Gulf Oil Company, spent several days sitting with the Refinery Board of Review and listening to appeals from the gasoline allocations. Mr. Buerger is a member of the board.

• • •

F. S. FALES, vice president of the Socony-Vacuum Oil Company, Inc., has been appointed chairman of the Petroleum Division of the Commerce and Industry Committee of the Citizens Family Welfare for New York City.

• • •

JOHN E. SHATFORD, president of the Louisiana-Arkansas Refiners Association, and a member of the Planning and Coordination Committee, took a hasty business trip to New York City. He has returned to Washington, D. C.

• • •

FAYETTE B. DOW, general counsel for the National Petroleum Association and the Pennsylvania Grade Crude Oil Association, is spending several days on his farm near Rochester, N. Y. He and his guests expect to get in considerable hunting while there.

• • •

PAUL E. HARALSON, assistant chief of the land department for the Magnolia Petroleum Company, Dallas, Tex., was married in Austin, on October 27, to MISS UNA CRAFT, of Bastrop, Tex. They left immediately for southern and eastern Gulf Coastal points on their honeymoon.

• • •

CAMPBELL M. HUNTER, of London, England, consulting engineer and oil mining expert, is visiting the United States and Canada.

• • •

GEORGE WILLIAM IVEY has been appointed a director of the board of the Kern River Oilfields of California, Ltd., and elected chairman of the board in succession to his father, WILLIAM IVEY, who died recently.

• • •

DR. F. H. GARNER, chief chemist of the Anglo-American Oil Company, delivered a lecture in Leeds, England, to a joint meeting of the Leeds section and the road and building materials group of the Society of Chemical Industry on "Asphaltic Bitumen Emulsions for Road Purposes."

• • •

J. W. FURNESS, chief of the Minerals Division, Bureau of Foreign and Domestic Commerce, now has an office with the Bureau of Mines. The Minerals Division is to be taken over by the Bureau of Mines, so will henceforth be in the Department of the Interior instead of the Department of Commerce.

• • •

A. C. FIELDNER, chief engineer of the Experiment Stations Division, U. S. Bureau of Mines, has been elected junior vice president of the American Society for Testing Materials. Mr. Fieldner is a member of several A.S.T.M. committees and has been chairman of Committee D-5 on Coal and Coke since 1920. He is chairman of the Sectional Committee on Classification of Coals, sponsored by the A.S.T.M. under the procedure of the American Standards Association. In 1923, Mr. Fieldner was given the degree of chemical engineer by Ohio State, and in 1931 it awarded him the Lamme Medal for meritorious accomplishment in engineering.

Barney Flynn Started as a Pumper

P. B. Flynn, western manager for the Reno Oil Company, and known by all his friends as Barney, left his home in Duke Center, Pa., at the age of 15 and struck out for himself, heading for the West Virginia oil fields. His boyhood had been spent in oil-country surroundings, so it was not difficult for him to get a job. Soon he was working as a pumper for J. T. Jones in Monroeville, Ohio. Two years later he was a rig builder and roustabout for the Hazelwood Oil Company in the Bradford Field of Pennsylvania. His next move was to Gas City, Ind., where for six months he was employed by the Citizens Natural Gas Company under William G. Skelly, later to become head of a great oil company.

P. B. FLYNN

With this experience behind him Mr. Flynn was ready for weightier responsibilities and he began taking charge of production for small companies. During the next five years he served as production superintendent for R. M. Brown, Haley Oil & Gas Company, Francis Oil & Gas Company and Florence Oil Company, all operating in Indiana.

Oklahoma now was talked of as the land of opportunity for the oil man, so Mr. Flynn in 1907 migrated to that state to become farm boss for W. H. Roeser, of Okmulgee. Soon afterward the Creek Oil Company engaged him to dispose of its Glenn Pool properties. The job was handled well and upon its completion the Reliance Oil Company made him its production superintendent. In this capacity he resided in Mounds and Bartlesville till 1928, when he moved to Wichita Falls, his present home, to take over the added responsibility of managing production for the Paraffine Oil Company, Houston, Tex., and the Reno Oil Company, Sistersville, W. Va. From this he was advanced to western manager of the Reno company, but he still oversees the production departments of Reliance and Paraffine.

Mr. Flynn is active in the civic affairs of Wichita Falls and in Rotary Club work. He takes a lively interest in sports.

FRED W. DUEMLER, vice president of the Walworth Company, is making a trip through the Mid-Continent.

• • •

FRED MANNING, of the contracting firm of Manning & Terry, was in Casper, Wyo., en route to the Cut Bank Field in northern Montana where his company has several rotary contracts under way.

• • •

GEORGE PEMBERTON, superintendent of the northern district of the Union Gas & Electric Company, which includes the transmission lines and small cities north of Cincinnati, Ohio, has been seriously ill and is recovering.

• • •

MRS. GLORIA JACK DRESSER, widow of CARL DRESSER, was married in Buffalo, N. Y., on Thursday, November 1, to BERNARD KIRSCH. Mr. and Mrs. Kirsch are both residents of Bradford, Pa., and will reside in that city.

• • •

JUDGE ROBERT D. GARVER, chief counsel of the Gas Service Company, Cities Service subsidiary controlling gas distributing companies in the Southwest, has been elected a member of the council of the public utilities section of the American Bar Association.

• • •

FRANK B. TAYLOR, SR., former state oil and gas supervisor of Wyoming, has joined the land department of the Sinclair-Wyoming Oil Company and will have offices with the production and pipe line departments of the company in Casper, Wyo. He will have charge of scouting the Rocky Mountain region for the company and will report direct to W. L. CONNELLY, of the Sinclair Prairie Oil Company at Tulsa. His territory will consist of Montana, Wyoming, Colorado, Utah, the Dakotas, Idaho and western Nebraska.

AMOS L. BEATY, chairman of the Planning and Coordination Committee, made a visit to New York to attend several conferences and to discuss the problems of the industry. He has returned to Washington, D. C.

• • •

CHARLES FAHY, vice chairman of the Petroleum Administrative Board, has returned to Washington, D. C., from the East Texas Field. He spent much time in East Texas assisting other governmental agencies in starting the drive on "hot" oil.

• • •

WIRT FRANKLIN, president of the Wirt Franklin Petroleum Corporation of Ardmore, Okla., was in Washington, D. C., to preside at the meetings of the production committee of the Planning and Coordination Committee. Mr. Franklin is chairman of the production committee.

• • •

E. H. EDDLEMAN, formerly secretary of the production and the transportation committees of the Planning and Coordination Committee, has left Washington, D. C., to assume his duties as vice president of the International Derrick & Equipment Company, in Dallas, Tex.

• • •

JACOB FRANCE, chairman of the program committee of the Planning and Coordination Committee, spent several days in Washington, D. C., conferring with members of the committee relative to resuming the purchase of gasoline. He went from Washington to New York to continue his negotiations.

• • •

A. J. O'ROURKE, who has been Gulf Coast district land man for the Skelly Oil Company, has been transferred from Houston to Midland as district land man for West Texas and New Mexico. WILLIAM FRITZ, a former Texas Railroad Commission attache, has been made scout and assistant land man. J. E. FITZGERALD remains as district geologist.

• • •

C. C. FORBES, of Tulsa, secretary of the Noble Drilling Company, was in Casper, Wyo., on business with the Rocky Mountain Drilling Company.

• • •

E. L. HARVIE, vice president of the Regal Oil & Refining Company, and W. D. WARD, representing British Industries, Ltd., both of Calgary, recently made a business survey of the Peace River area. They were accompanied by BERT BROMLEY, manager for the Regal company at Peace River.

• • •

SIR JOHN CADMAN, G.C.M.G., D.Sc., chairman of the Anglo-Persian Oil Company, who arrived in Australia on October 1 to consider the possibility of his company participating in the oil shale development of that country, has had conferred on him by the University of Melbourne the honorary degree of Doctor of Engineering.

• • •

MALCOLM M. GRAHAM, assistant treasurer of the Consolidated Gas Company of New York, recently celebrated his fiftieth anniversary with the company. He was employed as an office boy by the Equitable Gas Light Company on September 12, 1884. He is the first officer of the company to achieve a 50-year service record.

• • •

SUPERINTENDENT J. M. HEADLEE, of the Equitable Gas Company at Waynesburg, Pa., has been transferred to the Pittsburgh, Pa., offices. Mr. Headlee, division superintendent at Waynesburg since 1924, will assume his new duties in Pittsburgh on November 1, while G. T. BRADLEY, of Littleton, W. Va., goes to Waynesburg as head of the consolidated Divisions H and I, which include Wetzel and Marion Counties in West Virginia. Mr. Headlee has been connected with the Equitable Gas Company for 21 years.

NATURAL GAS DEVELOPMENTS

Freak Panhandle Well Covers Area With Sand

AMARILLO, Tex., Nov. 5.—Sand and water were spouted by a tremendous pressure from an intended water well at the U. S. Department of Commerce airport at Canadian as gas experts made efforts to analyze the pressure to determinte whether a valuable discovery has been made.

Hemphill County, a large area surrounding the well, where tools were blown from the 270-foot hole was covered with white sand blown from the well. A radio station, a few feet from the well, was literally repainted by the substance.

Fine mist continued to spray from the hole at a tremendous rate, only slightly less than the 2,000,000-foot daily rate initially, although there was not as much sand mixed with the spray as during the first 24 hours.

The "gas" is perfectly odorless and noninflammable. Matches have been struck near the well and there has been no explosion, leading to the assertion that the pressure comes from a "dead pocket." Gas in such pockets has no fuel value, it is said. Similar pockets have been struck in the Sanford area and in the Palo Duro Canyon.

The Department of Commerce is drilling the well to secure water for airport use. An electrical pump was to have been installed.

Some thought the drilling bit had just hit the edge of a water stream. Opinion varied as to the likelihood of the water supply lasting after the "gas pocket" has been emptied.

Buckshot Carbon Black Reported Development

AMARILLO, Tex., Nov. 5.—A recent development in the carbon black industry is production in the form of "buckshot," which is dustless and easier to transport.

The general superintendent of one of the major companies operating in the Borger Field explained that "buckshot" carbon black is made from loose carbon by a hardening process. Hitherto, carbon black was turned out for commercial purposes as a finely powdered substance. In the new form, it is carried to consumers, such as tire manufacturers, in tank cars and, when it reaches its destination, is crushed.

"It will take time to tell how much this new process will be in demand," said the general superintendent. He pointed out that the "buckshot" process is more expensive than the process in general use.

None of the carbon black produced in the Borger area has been shipped in "buckshot" form yet but may be soon.

LANSING MUNICIPAL PLAN OFF

MUSKEGON, Mich., Nov. 3.—The Lansing, Mich., city council's plan to finance a municipal natural gas system through a $2,500,000 Federal loan probably will be abandoned, Councilman Leo J. Smith, chairman of the ways and means committee, says. The proposal, approved by the voters at the September election, was referred to Secretary Ickes, Federal relief administrator, who returned it to William Haber, Michigan state relief administrator, who informed city officials only welfare labor could be provided, engineering services and materials to be paid for by the city virtually ending further consideration of the plan.

New York and Pennsylvania Gas Fields; Fair Completion in Wayne County

COUDERSPORT, Pa., Nov. 5.—One fair gasser was reported in the central New York shallow gas belt. This was the Turnbull well in the Ethel Arnold farm, Galen Township, Wayne County, completed at 3,000 feet for a daily production of 50,000 feet. Other completions were: Geneva Gas Co.'s test on the Stewart Nurseries property, Phelps Township, Ontario County, New York, completed dry at 1,865 feet and abandoned. Sands reached in this well were Niagara, 1,065-1,115 feet; Red Medina, 1,718-1,814 feet, and White Medina, 1,814-32 feet.

Pennsylvania Operations

Two were abandoned in the north central Pennsylvania gas area. E. Cabot's well on the John Stiles farm, Clymer Township, Tioga County, is an abandoned location, and Columbia Carbon Co.'s well on the C. Campbell farm, Ridgebury Township, Bradford County, was completed as a duster at 4,512 feet.

East Penn Development Co. is drilling at 2,680 feet on the Presbyterian Church property, Farmington Township, Tioga County. E. Cabot is down 2,270 feet on the W. F. Burroughs farm, Gaines Township, same county. East Penn is also drilling at 2,730 feet on the Roscoe Kemp test, Farmington Township, same county.

Potter County

Hanley and Bird have a crooked hole at 5,626 feet on their No. 2 S. Gooch, Allegany Township, Potter County. Pennsylvania Power & Light is drilling at 5,302 feet on its Clair Doty, Hector Township. Cunningham Natural Gas Co. is shut down on its George Carroll, Oswayo Township, at 4,507 feet. The Tully was reached at 4,455 feet. United Producers is drilling at 5,639 feet on its No. 2 M. Wilsey, Hebron Township. Stocum and others are shut down at 4,625 feet on their J. W. Wells test, Allegany Township, with the Tully reached at 4,561-4,619 feet. Electro Geometer is drilling at 4,269 feet on the Katherine Currier farm, Allegany Township. P. P. & L. is down 3,110 feet on its Chloe Kenyon, Hebron Township.

Hebron Field

Penn United is drilling at 3,080 feet on the Burt and Lyman property, Hebron Township, Potter County. Lycoming's four drilling operations follow: On the W. B. Hemphill farm, Hebron Township, Potter County, down 810 feet; on the W. White farm, same township, drilling at 1,965 feet; on the O. W. Greenman farm, same township, drilling at 3,355 feet, and on the R. and G. Carmer farm, same township, drilling at 2,120 feet. Potter Development Co. has a location for its No. 2 Penn State, and is drilling at 2,525 feet on its B. L. Langworthy, same township. Sylvania Natural Gas Corp. is drilling at 845 feet on its No. 2 John Higley, same township. Bayliss is drilling at 1,685 feet on his Earl Pye well, Genesee Township.

Tioga Natural Gas Co. is still encountering trouble in its Emporium Bank tests, Shippen Township, Cameron County. Its No. 1 Emporium Bank, shut down until recently, is again tied up with a fishing job. No. 2 Emporium Bank is shut down at 4,470 feet. United Producers has a new location staked on the J. Ruppert farm, Hebron Township, Potter County.

Clarion County

In Clarion County, Pennsylvania, Alum Rock Gas Co. got the top of the Red Rock at 1,265 feet and is drilling in Red Rock shells at 1,362 feet on its Bank Lot, Highland Township. Vogelbacher Brothers are in the Red Rock shells at 914 feet, Pfendler farm, Knox Township, with the top of the Red sand reached at 872-87 feet, and the shells at 909 feet. Alum Rock took 27 bailers of salt water from its Glass farm well, Farmington Township, same county, in the hard shells at 1,180 feet. Gilford Brothers put 450 feet of 6¼-inch casing in their Shaming test, Farmington Township, and are through 40 feet of sand at 500 feet.

Neely is held up for caves at 1,600 feet on the Pollack farm, Perry Township, where the drill went through 30 feet of sand. Fryburg Motor is in slate at 475 feet on their McCloskey, Farmington Township. Shorts Brothers, in sand running without jars and with bits improperly dressed, is hung up and trying bumper at 510 feet on the S. Win Wilson farm, Highland Township, same county.

New York Operations

Empire Oil & Gas Co. is drilling at 1,650 feet on the Dean estate, Alma Township, Allegany County, where the Elk was expected at around 1,960 feet. Higgins and others are shut down on the Steadman farm, Allen Township, Allegany County. Tri-State Gas is drilling at 650 feet on the N. D. White farm, Bath Township, Steuben County. Belmont Quadrangle Development Co. is building a rig on the T. H. Wing farm, Greenwood Township, same county. This company is spudding at 40 feet on the Joseph Waugh farm, Dix Township, Schuyler County. Farman and others are building a rig on the Murray estate, Belfast Township, Allegany County.

H. O. Loebell Accorded Charles A. Monroe Award

ATLANTIC CITY, N. J., Nov. 3.—Recognition of distinctive contribution toward the advancement of the gas industry was today conferred upon Henry O. Loebell, of Chicago, general sales manager of the Natural Gas Pipe Line Co. of America, at the annual convention of the American Gas Association.

Mr. Loebell devised the highly successful house heating program inaugurated July 19, 1933, by the gas companies in Chicago. In recognition, he was presented with one of the association's coveted honors—the Charles A. Munroe Award, granted only for noteworthy service. The award consists of a substantial financial acknowledgment and appropriate certificate.

The presentation was made by Charles A. Munroe, of New York, donor of the award. Mr. Loebell was designated to receive this honor by the Charles A. Munroe Award Committee, whose recommendation was approved by the executive board of the American Gas Association.

This year marks the close of Mr. Loebell's third decade in gas industry activities.

Michigan Natural Gas Development Expands

MUSKEGON, Mich., Nov. 3.—New natural gas wells of commercial size completed in Michigan during the first nine months of 1934 number 34 with an estimated initial potential production of 108,239,400 feet per day.

Twenty-eight of the 34 new wells were in pools now being drawn upon for commercial service, 20 being in Broomfield Pool, 6 in Vernon, and 2 in Austin. The remaining six were "discovery" wells indicating the location of at least four "possible" new commercial pools in Mecosta and Montcalm Counties.

Estimated reserves of the Broomfield and Vernon Pools were not materially increased by the findings there, but the two wells in the Austin Pool established its reserves as sufficient to warrant service to Muskegon.

Most important natural gas developments since January 1, 1934, have been: (1) Proving the reserves of the Austin Pool, Mecosta County, to an extent justifying the beginning of construction of the American Michigan pipe line to Muskegon and Muskegon Heights; (2) findings of gas in Sections 32 and 34, Millbrook Township, Mecosta County, and in Section 11, Belvidere Township, Montcalm County, in such quantities as to indicate the possible existence of a new county line commercial pool; (3) isolated "wildcat" discoveries of gas in commercial quantities in Section 23, Hinton Township, Mecosta County, 7,500,000 feet; in Section 23, Martiny Township, Mecosta County, 1,000,000 feet; in Section 3, Home Township, Montcalm County, 3,200,000 feet (not completed as a gas well); and in Section 36, Home Township, 2,000,000 feet; (4) gas finds of noncommercial size in Section 6, Morton Township, Mecosta County, in Section 17, Richland Township, Montcalm County, and in Section 36, Gilmore Township, Isabella County.

Natural gas production and utilization during the nine months, including casinghead gas used in the production of gasoline, has been at the rate of approximately 8,200,000 feet per day.

Twenty-five Michigan communities with a population of approximately 226,000 persons will be served with natural gas when Muskegon and Muskegon Heights are added in November.

Greatest natural gas activity at present is in an oblong area some 27 miles long and 16 to 17 miles wide running northwest to southeast, embracing Austin, Martiny, Morton, Hinton, and Millbrook Townships, Mecosta County; Broomfield and Sherman Townships, Isabella County; and Belvidere, Home, and Richland Townships, Montcalm County.

ALVINSTON GAS FRANCHISE

ALVINSTON, Ontario, Nov. 3.—Ratepayers of Alvinston at a special election this week approved the granting of a natural gas franchise to the Union Gas Co. of Chatham for 10 years with the option of extension. The company piped natural gas to Alvinston from the Dawn Field in 1930 but has been operating without a franchise.

MUNICIPAL GAS CONFERENCE

CHATHAM, Ontario, Nov. 3.—Mayor I. L. Davis of Chatham has invited gas consuming municipalities in the three southwestern Ontario counties to send delegates to a conference to discuss natural gas rates.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depths of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimate of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Withdrawal of Gas From Oil Pool Reduces Liquid Volume Left

When gas is taken from an oil pool just what result or results does it have on the oil that is left in the pool? I am assuming that in general the effect is the same whether oil is taken with the gas or not. It is obvious of course that this removal of gas must reduce the pressure which drives the oil from the sand to the well, but do not other changes take place? For instance, is there a change in the viscosity of the oil remaining in the pool? I would be glad to receive as full information on this point as you can give me.—N. M. N.

The following reply to your question is provided by Ben E. Lindsly, senior petroleum engineer in the U. S. Bureau of Mines:

"The withdrawal of gas or oil or both in appreciable quantity from a natural oil reservoir causes the pressure within the reservoir to diminish, and if the oil is completely saturated with gas this dissolved gas begins to evolve from solution. The liberation of gas from solution in oil causes the oil to change in several ways, the principal changes being: (1) Reduction in volume, or 'shrinkage'; (2) increase in specific gravity (decrease in degrees A.P.I.); (3) decrease of energy in the oil; (4) increased viscosity; (5) increased surface tension.

"The amount of shrinkage an oil undergoes when gas is liberated depends upon the quantity of gas liberated and also upon its composition. A given volume of the heavier gases, propane and butane for example, will occupy more space in the oil than an equal volume of methane. The reason for this probably is that the molecules of the heavier gases are larger than those of the lighter gases. When gases are not in solution, and particularly when they are at low pressures, the distance between the gas molecules is so much greater than the dimensions of the molecules themselves that the mere size of the molecules has little effect upon the space occupied by the gas.

"The withdrawal of gas causes a shrinkage of the liquid volume of an oil pool regardless of whether or not oil is produced. This creates gas spaces in the sand body and tends to promote by-passing of gas which might have been able to perform some useful work in driving oil toward a well. Some of the gas liberated from solution finds its way to the gas cap and becomes a part of the free or extraneous gas. Also, where the oil-bearing formation is a fine-grained sand some of the gas liberated from solution probably remains within the oil body in the form of minute bubbles. Such bubbles undoubtedly would interfere with the free flowing of the oil within the sand body.

"The loss of energy in the oil due to the liberation of dissolved gas is important. Experiments on 'bottom hole' samples in East Texas showed that the oil contained between 330,000 and 430,000 foot-pounds of energy per cubic foot. This energy is due to the gas in solution, which evolves and expands upon reduction of pressure.

"No data have been given regarding the increased viscosity and surface tension resulting from liberating gas from solution in oil. However, it must be apparent that increasing the specific gravity of an oil by removing its lighter constituents must result necessarily in increasing its viscosity and surface tension, because the lighter constituents invariably have low viscosity and low surface tension. The removal of constituents having low viscosity and surface tension, therefore, will result in increasing the viscosity and surface tension of the residual oil.

"In conclusion, the withdrawal of gas from an oil pool reduces the energy in the dissolved and in the free gas, causing the oil to shrink in volume, creating voids and minute bubbles within the oil body. This condition increases the resistance to flow. Increased resistance to flow also develops through increased viscosity and surface tension of the residual oil. Hence the unnecessary withdrawal of gas from an oil pool should be studiously avoided, as such withdrawal decreases the ultimate recovery of oil and thereby violates the principles of conservation."

Using Coloring Matter to Detect Source of Water in a Well

Will you please advise what is the name of the coloring matter commonly used to determine the source of water leaking into a well? In the particular case which I am dealing with I suspect the water is coming from another nearby well through a faulty shutoff. I would appreciate such information as you can give me concerning the use of coloring matter in this way, how much should be used, how it should be introduced, and so on.—C. E. M.

The dyes commonly used are fluorescein, eosine, magenta and other fluorescent organic dyes. Fluorescein has a distinctive yellowish-green color by reflected light and is probably best adapted for the purpose of testing water movements in oil fields.

In U. S. Bureau of Mines Bulletin No. 195, "Underground Conditions in Oil Fields," A. W. Ambrose says in a discussion of fluorescein as an agency for detecting faulty shutoffs and the source of water leakages:

"Fluorescein ($C_{20}H_{12}O_5$) is a weak acid and represents the type of detector that can be easily recognized by its color (yellowish-brown) when dissolved in large volumes of water. When present in dilute quantities in a solution of clear water, it shows a magnificent yellowish-green fluorescence by reflected light, which may appear colorless by transmitted light. This dye is almost colorless in dilute solutions containing free acid (except carbonic), hence the dye is more certain to be recognized if the solution is made slightly alkaline.

"Probably fluorescein is superior to all other dyes, because it is noticeable when present in minute quantities and is not absorbed by clays. Fluorescein will penetrate an acid solution further than eosine and give a color reaction that eosine may fail to give. Also it is not affected by sulphureted hydrogen and sulphurous acid.

"It diffuses very rapidly and can be detected with the naked eye when present in the ratio of 1 part in 40,000,000. By means of the fluoroscope it can be detected in amounts varying from 1 part in 500,000,000 to 1 part in 10,000,000,000 of clear water, but the practical limit of the fluoroscope is 1 part in 2,000,000,000, provided the water is pure and perfectly clear. If the liquid is muddy, filtering before observation is necessary.

"The dye should be dissolved in a bucket of water. For testing a leaky water string, the dye can be poured around the outside of the casing and washed down with a hose.

"For a test at the bottom of the hole, a solution of the dye may be placed inside a glass container (R. E. Collom, petroleum technologist, Bureau of Mines, has used a large demijohn) and lowered on the bailer or bit. The container can be broken there by a blow with the dart of the bailer or with the bit."

Why Was It Called That?

ROUSTABOUT

The roustabout of the oil fields is the man who appears on the scene with the completion of a well. He performs the hundred and one jobs that must be looked after on the lease after the drilling crew has left. The designation is believed to have been borrowed from river steamboating, where it is applied to the wharf laborer or deckhand who moves, loads or unloads freight. It is of somewhat obscure origin, but is allied to "roustabout," a rough, bustling person.

Many Things to Be Considered in Development of Oil Pool

In the development of a new oil field various things certainly have to be considered with a view to getting the greatest possible quantity of oil from the field at the least possible expense. I know in a general way what some of these factors are, but I would appreciate it if you would name what petroleum engineers regard as the vitally important ones.—W. A. F.

Many engineering considerations must be taken into account in the development of an oil pool with the purpose of gaining high recovery at low cost. Among the most important should be enumerated well spacing, distribution of wells on the structure, greatest possible withdrawal from wells with lowest gas-oil ratio, returning gas to the sand to maintain reservoir pressure and prevent loss of gas from solution, and lengthening the life of wells by carefully selected tubing, chokes and beans.

Discussing this phase of the oil business in a paper dealing with the unitization plan of development, Dr. J. B. Umpleby, petroleum engineer, said:

"Well spacing is commonly believed to be a matter of the balance sheet. Many contend that, other factors being equal, the more closely wells are spaced the greater will be the ultimate recovery. This may not be entirely true, as experiments suggest that converging lines of flow towards a well necessitate greatly increased velocity of oil movement in its immediate vicinity, and hence a localization near the well of high energy consumption may modify current views.

"Equally important with the total number of wells drilled is their distribution on structure. The relations of oil, gas and water are different in different pools. In such places as the Mexican fields and certain of the salt domes of the Gulf Coast, water encroaches as rapidly as room is made for it by production. In most fields, as Oklahoma City and East Texas, water encroaches at a moderate rate and is a factor of importance in expelling oil from the reservoir.

"It follows that in each particular pool plans for well distribution, like well spacing, should be subject to modification as development proceeds and information accumulates. In general, early wells should be widely spaced in order to determine reservoir characteristics and productive limits at the earliest stage possible in the development history. Few wells should be drilled in the central gas area and few near the water lines. As surplus gas becomes available, incident to oil production, the former wells may be used for recycling operations, and if the encroachment of edge water is too slow, the latter may be used for increasing its rate by introducing water under pressure, the aim of both operations being to maintain reservoir pressure and hold gas in solution in the oil.

"Best practice calls for the greatest production of oil at the least possible expenditure of reservoir energy. It has long been recognized that reservoir energy is exhausted long before the reservoir is drained of oil. The greatest and most practical conservation applicable to oil pools is a proper conservation and utilization of reservoir energy to the end that ultimate recovery may be increased. The various steps necessary to the fullest realization of this objective cannot be taken unless one management controls the entire operation of a pool."

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Nov. 3 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
55⅝	39	4,200	42⅞	39¼	42¼	Amerada Corp.	774,875	N.P.	50cQ	10-31-34	47⅝	18½	22¾	12	23	11¼
35¼	21½	5,000	24½	23	24½	Atlantic Refining	2,673,834	$25	25cQ	9-15-34	32½	12⅜	21⅞	8⅝	23⅝	8⅝
10	5⅞	4,700	6¼	6	6¼	Barnsdall Corp. A	2,248,795	$5	....	5-11-31	11	3	7	3⅜	14½	4
19¼	6⅞	9,600	8⅜	7¾	8	Columbia Gas & Elec.	11,610,036	N.P.	....	5-15-34	28⅛	9	21	4¼	45⅝	11⅝
14¼	7¼	13,500	8	7½	8	Consolidated Oil Corp.	14,218,835	N.P.	14c	10-31-34	15¾	5	9	4	15⅞	4½
22⅜	15⅜	11,400	17⅛	15⅝	17	Continental Oil of Delaware	4,738,593	$5	25c	10-31-34	19⅝	4⅞	9⅜	3⅝	12	5
23½	12	1,500	16	15	15¾	General Asphalt	387,149	$10	....	6-15-32	27	4⅝	15½	4¾	47	9⅝
5⅝	2½	200	3	2⅞	3	Houston Oil (new)	1,098,618	$25	....	10-17-30	7⅜	1⅞	5⅜	1⅛	14⅛	3
3⅜	1	100	1	1	1	Louisiana Oil Refining	1,302,158	N.P.	....	.....	4	⅝	2¼	½	4½	1
14¾	9⅛	900	10⅝	10	10½	Mid-Continent Petroleum	1,857,912	N.P.	25c	11-15-34	16	3¾	8⅞	3¾	16¾	5
21⅛	10	100	10½	10⅛	10⅛	National Supply of Delaware	382,591	$25	....	5-15-31	28⅝	4	13	3½	10¼	5
15⅞	8½	6,400	9⅜	8¾	9¼	Ohio Oil Co.	6,563,107	N.P.	15c	9-15-34	17⅝	4¾	11	5	19½	5⅛
8⅞	5½	1,000	7	6¾	6¾	Pacific Western Oil	1,000,000	N.P.	25c‡	10-25-33	9½	3	8	3	15	2⅞
2½	⅝	300	¾	⅝	¾	Panhandle P. & R.	198,770	N.P.	....	.....	4¼	⅜	1¼	¼	4¼	⅝
20¾	13⅜	8,800	15	13⅞	14⅞	Phillips Petroleum	4,154,687	N.P.	25c	12-1-34	18⅜	4¾	8⅛	2	16⅝	4
16⅜	8	3,000	8⅞	8⅜	8⅞	Plymouth Oil Co.	990,261	$5	25cQ	9-29-34	17⅝	6¾	12½	6	18	6
14⅞	6¼	3,300	6⅜	6¼	6⅝	Pure Oil	3,038,370	N.P.	....	9-1-30	15⅜	2½	6½	2⅞	11⅞	3¼
39¼	13⅜	8,800	8⅞	8⅜	8⅞	Royal Dutch N. Y. shares	432,224	$14	$1.35	7-31-34	39¾	17⅝	23¾	12⅛	42⅝	13
38⅜	20¾	6,200	25⅜	22¼	25⅛	Seaboard Oil of Delaware	1,204,460	N.P.	15cQ§	12-15-34	43⅜	15	20⅜	6⅝	20¾	5½
11½	6	3,200	6½	6⅛	6½	Shell Union Oil	13,070,625	N.P.	....	6-30-30	11⅝	4	8¾	2½	10¼	2½
89	57	900	70	67	67	Shell Union Oil pfd.	400,000	$100	....	7-1-31	61	28½	65¼	18	78	15
15½	7¼	6,500	14⅛	13¼	14⅛	Simms Petroleum	461,000	$10	30c	8-1-34	12⅜	4⅞	7½	3¼	11	3½
11½	6	100	6⅜	6⅜	6⅜	Skelly Oil	1,008,514	$25	....	12-15-30	9⅞	3	5¾	2½	12⅞	2
19⅞	12½	23,700	14	13⅛	13⅞	Socony-Vacuum	31,019,694	$25	15cQ	9-15-34	17	6	12¼	5¼	21	8⅜
42⅞	26½	24,900	32¾	30¾	32⅜	Standard Oil of California	13,102,900	N.P.	25c	12-15-34	45	19½	31⅞	15⅛	51¾	23⅛
32¾	23¼	8,900	24¼	23¼	24¼	Standard Oil (Indiana)	15,941,894	$25	25cQ	12-15-34	34	17	25⅛	13⅛	38½	13½
41	27	100	26½	26½	26½	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	39⅞	12¾	16½	7	19	7¾
50⅛	39¼	15,600	41⅞	39¼	41⅞	Standard Oil of New Jersey	25,740,065	$25	50cSA§	12-15-34	47½	22¾	37⅜	19⅞	52½	26
72	51½	700	72	70¼	72	Sun Oil	1,733,013	N.P.	25cQ†	12-15-34	59	35	39⅞	24⅜	45¼	26⅜
29⅜	19¾	7,400	21¼	20	21	Texas Corp.	9,486,417	$25	25cQ	10-1-34	30⅛	10¾	18¼	9¼	36¼	9⅛
6½	2½	2,800	⅝	3	3	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	6½	1⅜	4	1½	6½	1⅞
14⅜	8	8,700	9⅛	8	9⅛	Tide Water Associated	5,618,672	N.P.	....	2-16-31	11⅜	3⅛	5⅝	2	9	2⅛
85⅛	64½	1,400	76¾	74⅞	76¾	Tide Water Associated pfd.	666,524	$100	$1.50Q	10-10-34	65¼	23½	60	20	68	20½
20½	11½	4,400	15⅝	14½	15⅝	Union Oil of California	4,386,070	$25	25cQ	11-10-34	23⅜	8½	15⅝	8	26⅝	11
21¼	15⅝	400	20¾	20½	20⅝	Union Tank Car	1,200,000	N.P.	30cQ	9-1-34	22¾	10½	19¼	11¾	25⅛	16
5¾	2½	1,200	2⅝	2½	2½	Wilcox Oil & Gas	424,839	$5	....	5-10-28	5½	2	8¾	2¾	9⅜	2¾

*Ex-dividend. †Plus extras in common stock. ‡Initial dividend. §Plus extras.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Nov. 3 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
38	26	No sales ..	..	..	..	Buckeye Pipe Line Co.	200,000	$50	75cQ	12-15-34	39¾	25	35	17½	56	30
5½	2	1,300	2⅜	2	2	Carib Syndicate	579,000	25c	....	.....	7¾	¼	⅝	¼	2⅜	¼
126½	115	No sales ..	..	..	..	Chesebrough Mfg. Co.	120,000	$25	$1Q†	9-29-34	129	71	90	53	129½	75
4¼	1½	15,600	1⅝	1½	1⅝	Cities Service	37,804,394	N.P.	....	6-1-32	6¼	1½	6⅞	1¼	20¾	5
3¼	⅝	1,900	⅞	⅝	⅞	Colon Oil	2,200,000	N.P.	....	.....	4	¼	1¼	¼	3⅛	¼
3⅞	1	1,000	1¼	1	1⅛	Cosden Oil	399,687	$1	....	.....	3⅞	1⅝	2⅞	¼	3⅜	⅝
14⅜	9⅝	5,700	12½	12⅛	12½	Creole Petroleum	6,974,356	$5	....	.....	12	4¾	3⅛	1¾	3⅞	1⅝
7½	4¼	100	4¼	4¼	4¼	Darby Petroleum	509,696	$5	25c	7-25-34	8	2⅛	7⅛	1⅝	2½	1⅝
2¼	1	No sales ..	..	..	..	Derby Oil & Refining	263,162	N.P.	....	.....	2¾	⅞	3	1	6	1½
37	30	50	31¼	31¾	31¾	Eureka Pipe Line	50,000	$100	$1Q	11-1-34	41¾	20	35	18	36	19
76¾	49¾	1,700	54¼	51½	54¼	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	62	24	44¾	23	75½	25⅜
46⅜	33¼	8,100	39½	37⅝	39½	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	10-1-34	105½	40	55	35⅝	72	44½
16½	12⅝	6,600	16½	16¼	16½	Imperial Oil of Canada	26,857,152	N.P.	25cSA†‡	6-1-34	15⅞	6½	10⅞	6¼	18¼	7⅜
6⅞	3¾	100	4	4	4	Indiana Pipe Line	300,000	$10	15cSA†	11-15-34	8	3⅛	7½	2¾	21⅛	5½
31	19¾	8,000	31	29	30⅞	International Petroleum	14,247,088	N.P.	56cSA†‡	6-1-34	23½	8⅞	12¼	8	15½	7⅝
4	2⅛	5,800	4⅛	3½	4⅛	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	2¼	⅛	2½	½	2	½
5⅞	3½	No sales ..	..	..	..	Lion Oil Refining	270,000	N.P.	....	10-27-30	9½	1¼	3½	⅞	6¾	1½
8⅝	4¼	200	5¼	5¼	5¼	Lone Star Gas	5,382,723	N.P.	16cQ§	3-31-34	11⅞	4⅜	11	3⅜	29	5½
5½	4	300	4½	4½	4½	Mountain Producers	1,682,182	$10	15cQ	10-1-34	6½	2½	4⅜	2⅛	5⅞	2
18⅛	13¼	900	14½	14⅛	14½	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-34	20	10	14⅝	8	26½	9⅜
9½	7	100	7⅛	7⅛	7⅛	National Transit	509,000	$12.50	40cSA	6-15-34	10	5½	10½	6	17½	5
2½	1¾	1,200	2	2	2	New Bradford Oil	1,445,202	$5	10c	9-15-34	2⅛	½	⅞	¼	1½	½
2¾	1	500	1⅛	1⅛	1⅛	New Mexico and Arizona	1,000,000	$1	....	.....	1⅞	½	1¼	⅜	3	⅜
4¾	3	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	10-15-34	4⅞	3	9¾	7½	14½	5⅞
7	4⅝	200	6	6	6	Northern Pipe Line	120,000	$10	25cSA	7-2-34	6⅛	4¼	5½	3⅛	35½	20
2⅝	⅞	3,700	1½	1⅜	1½	Pantapec Oil	1,608,700	N.P.	....	.....	3⅜	⅛	⅝	1/32	2	⅜
3⅜	⅞	100	1⅛	1⅛	1⅛	Ryan Consolidated	296,931	N.P.	....	.....	4¼	⅜	2⅛	⅜	3	¾
7⅞	5½	600	6¼	5¾	6	Salt Creek Producers	1,496,859	$10	20cQ	11-1-34	9¼	3½	5½	2⅞	7⅝	2¾
26½	17½	2,500	20½	20	20	South Penn Oil	1,200,000	$25	30cQ	9-29-34	22⅛	11	16½	9⅝	23⅞	9¼
5½	4	No sales ..	..	..	..	Southern Pipe Line	100,000	$10	15cSA	9-1-34	6	2⅛	10	3¾	17	7
47	41	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	10-1-34	43	24½	37	27	42½	25
17⅝	14⅝	2,700	15⅜	15⅛	15⅜	Standard Oil of Kentucky	2,606,983	$10	25cQ	9-15-34	19¼	8⅜	15⅞	8⅞	23⅝	12⅛
16⅜	8⅞	600	9	8⅞	9	Standard Oil of Nebraska	190,822	$25	....	6-20-34	20½	11	19	10¼	36½	16
28½	12¼	1,400	12¾	12⅝	12⅝	Standard Oil of Ohio	753,740	$25	....	1-3-33	41	15½	30⅛	15½	62½	23
2	1/32	1,000	1	1	1	Sunray Oil	1,162,840	$5	....	4-15-31	1⅛	¼	⅝	⅛	5¼	⅛
11	4⅝	100	5¾	5¾	5¾	Texon Oil & Land	936,028	N.P.	15cQ†	9-29-34	13¾	6¼	10½	4½	12⅞	2½

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Kansas Wildcats

(Continued from Page 50)

MORRIS COUNTY

Home Gas Co.'s No. 1 Kennedy, C NW SE Sec. 7-16-7.
Sand 650 ft.; 500,000 ft. gas; comp.

NESS COUNTY

Texas Co. and Gypsy Oil Co.'s No. 1 Goodman, C SW SW Sec. 21-19-23w.
Rotary rig.

OSAGE COUNTY

Jim Edwards' No. 1 Detrich, C NW SE Sec. 31-14-15.
Spudded and S.D.

OSBORNE COUNTY

Carmen & Hershey's No. 1 Fritz, C NE NE Sec. 9-10-14w.
Set 10-in. csg. 3,420 ft.; S.D. 3,875 ft.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w.
Drlg. 330 ft.

McBride et al's No. 1 Popp, SW SW NE Sec. 33-24-4w.
Set 8-in. csg. 3,422 ft.; T.D. 3,425 ft.

Privett Drlg. Co.'s No. 1 Crotts, NE NW NE Sec. 27-26-10w.
T.D. 1,993 ft.; U.R. 10-in. csg.

RICE COUNTY

Foraker, Nickerson et al's No. 1 Lyon, SE NW Sec. 27-20-8w.
S.D. 1,060 ft.

Lario O. & G. Co. and Reserve Pet. Co.'s No. 1 Shepherd, NW NW SW Sec. 18-22-5w.
Location.

Lario O. & G. Co. et al's No. 1 Schrag, NW SE SW Sec. 22-19-4w.
Rig.

Marathon Oil Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
Set 10-in. 3,408 ft.; drlg. 3,755 ft.

Stark & Wells' No. 1 Smith, NW cor. Sec. 30-19-8w.
Location.

Twin Drlg. Co. et al's No. 1 Rolfs, SW NW SW Sec. 13-17-9w.
T.D. 1,875 ft.; fishing.

Langston et al's No. 1 Markle, NE SW Sec 1-20-9w.
8-in. 2,943 ft.; drlg. 3,050 ft.

Tingling et al's No. 1 Maupin, NW SW SW Sec. 1-18-8w.
T.D. 2,740 ft.; fishing.

ROOKS COUNTY

Stearns & Streeter's No. 1 Meyers, NE NW NW Sec. 24-9-16w.
Spudded.

RUSH COUNTY

Corbett, Barbour et al's No. 1 Schmidt, SW SW SE Sec. 10-17-16w.
Drlg. 2,220 ft.

Lario O. & G. Co. and Phillips Pet. Co.'s No. 1 Benbow, NW NE NE Sec. 12-17-19w.
Cellar.

RUSSELL COUNTY

Blair et al's No. 1 Fink, SW NW SE Sec. 16-14-14w.
Rigging up.

Eldorado Ref. Co.'s No. 1 Stratman, SW SE SE Sec. 32-14-11w.
Set 6-in. csg. in Oswald lime 2,876 ft.; drlg. 2,920 ft.

Darby Pet. Co.'s No. 1 Jarus, NW SW NE Sec. 16-16-12w.
Rig.

Tom Palmer et al's No. 1 Herbel, NW SW Sec. 4-13-11w.
Set 8-in. csg. 2,742 ft.; drlg. 2,745 ft.

SALINE COUNTY

Dieter et al's No. 1 Herrington, NE NW SE Sec. 3-13-1w.
Drlg. 1,365 ft.

SCOTT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Vaniman, C SE NE Sec. 15-20-33w.
H.F.W. 4,130-40 ft.; drlg. 4,195 ft.

SEDGWICK COUNTY

Aladdin Pet. Co. et al's No. 1 D. Lauck, SE NE NW Sec. 21-28-2.
Rig.

Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 24-28-2w.
10-in. csg. 2,290 ft.

Leo Keller et al's No. 1 Russell, SW SW NW Sec. 16-29-2.
Cellar.

D. R. Lauck et al's No. 1 Roy, SE SW Sec. 34-29-1w.
8-in. csg. 3,010 ft.; drlg. 3,130 ft.

Syndicate O. & G. Co. et al's No. 1 Ratzlaff, NE NW NW Sec. 30-26-2.
12-in. csg. 1,301 ft.; drlg. 1,510 ft.

STAFFORD COUNTY

Atlantic Oil Prod. Co. and Phillips Pet. Co.'s No. 1 Guthrie, C NW NW Sec. 15-25-11w.
Bldg. rig.

SUMNER COUNTY

Wentz et al's No. 1 Horsley, CSL SW SW SW Sec. 18-35-1.
Set 8-in. csg. 3,188 ft.

TREGO COUNTY

Marathon Oil Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
T.D. 4,422 ft.; U.R. 6-in. csg.

WASHINGTON COUNTY

Rose Oil Co. et al's No. 1 Penwell, NE NW SE NE Sec. 16-3-3 (O.W.D.D.).
Old T.D. 1,720 ft.; R.U. and S.D.

WOODSON COUNTY

Schwartz et al's No. 1 Collins, SW NW NE Sec. 30-23-14.
Drlg. 610 ft.

Gulf Coast Wildcats

(Continued from Page 51)

Comp.; 7-in. csg. 4,001 ft.; I.P. 179 bbls. per hr.; tubing pressure 450 lbs.; csg. pressure sealed off.

Texas Co.'s No. 1-A Massey, 330 ft. out of NW cor. of 33-ac. tract in H. Stevens Sur.
Cmtd. csg. 7,957 ft.

FLEDGER—BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 4-A Hurt, 200 ft. SW of No. 3-A, W. C. Carson Sur.
T.D. 6,850 ft.; comp. for wst gasser.

Humble O. & R. Co.'s No. 1 Bob McFarland, 535 ft. S, 1,900 ft. W of SE cor. W. C. Carson Sur.
Comp.; 13,000,000 ft. of gas; T.D. 6,800 ft.

STRATTON RIDGE—BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Bowers, 2,400 ft. N line and 1,550 ft. from E line of Jared Groce Sur.
Drlg. shale 3,163 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Texas Co.'s No. 84 Hogg, 2,483 ft. N, 50 ft. W from SE cor. of lease in M. Varner Sur.
Temporarily S.D. 6,242 ft.

BARBERS HILL—CHAMBERS COUNTY

McAlbert Oil Co.'s No. 7 J. F. Wilburn, 150 ft. W of No. 6 and C of H. Griffin Sur.
Drlg. hard lime 4,391 ft.

Mills Bennett Prod. Co.'s No. 2 Fisher, 150 ft. N of No. 1, Wm. Bloodgood Sur.
Swbng.; T.D. 5,466 ft.

Mills Bennett Prod. Co.'s No. 10 Wilburn, 100 ft. S N line, 150 ft. W of No. 9, Henry Griffith league.
Comp.; no gauge; T.D. 4,861 ft.

Moody Corp.'s No. 1-C E. W. Barber, 303 ft. from N line and 312 ft. from E line of "B" lease, H. Griffith Sur.
Drlg. gumbo 1,050 ft.

Humble O. & R. Co.'s No. 7-B Kirby, 200 ft. W of No. 6 in Henry Griffith league.
10¾-in. csg. at 1,832 ft.; T.D. 1,839 ft.

Sun Oil Co.'s No. 6 Higgins, 302 ft. W of E line and 432 ft. N of S line of lease.
Reaming sand and shale 3,433 ft.

Sun Oil Co.'s No. 10 Chambers, 60 ft. from N and W lines of lease.
Drlg. shale 2,658 ft.

Sun Oil Co.'s No. 17 Wilburn fee, 138 ft. E of W line and 40 ft. S of N line and 120 ft. W of No. 16.
Derrick.

Sun Oil Co.'s No. 22 J. Wilburn, midway between wells No. 17 and 21, or 150 ft. from each well.
Sidetracking at 3,150 ft.

Texas Gulf Prod. Co.'s No. 4-B E. W. Barber, 75 ft. S of Moody Corp.'s No. 4-A Barber and 75 ft. from SW line of 38-ac. lease, H. Griffith Sur.
Drlg. salt 2,744 ft.

Texas Gulf Prod. Co.'s No. 5 J. F. Wilburn, 110 ft. W of No. 3 and 50 ft. N of S line of lease, Wm. Hodge Sur.
9⅝-in. csg. 4,160 ft.; T.D. 4,195 ft.

Texas Gulf Prod. Co.'s No. 3 O. W. Winfree, 595 ft. S of N line and 50 ft. W of E line of lease.
Top oil sand 4,780 ft.; drlg. 4,786 ft.

Yount Lee Oil Co.'s No. 25 Chambers County, 75 ft. S, 50 ft. W of NE cor. of lease.
Drlg. oil sand 4,330 ft.

Yount Lee Oil Co.'s No. 27 Chambers Co., 400 ft. W of No. 24 and in line with Nos. 24 and 21.
Derrick.

Yount Lee Oil Co.'s No. 28 Chambers County, 50 ft. N S line, direct offset to Sun's No. 10 Chambers County, Wm. Bloodgood Sur.
Derrick.

Yount Lee Oil Co.'s No. 9 Phillips, 186 ft. W of No. 8.
Cmtd. 7⅝-in. csg. 3,719 ft.

BIG CREEK—FORT BEND

Edwards Drlg. Co.'s No. 2 Hausler, 500 ft. SW from No. 1 and 100 ft. from SE line of 103.5-acre tract, Barnabas Wickson Sur.
Abd. location.

BLUE RIDGE—FORT BEND COUNTY

Mills Bennett Prod. Co.'s No. 2 Luscher, 1,950 ft. S and 750 ft. E of westerly NW cor. 500-ac. tract, Thos. Hebermaches Sur.
Drlg. shale 4,000 ft.; reduced hole to 6½-in.

BOLING—FORT BEND COUNTY

Allied Minerals, Inc.'s No. 1 J. H. Blackwell, 1,400 ft. from E line, 100 ft. from S line of 50-ac. of J. H. Blackwell 100 ac., John Huff Sur.
T.D. 958 ft.; set 12½-in. csg.; W.O.C.

Midland Oil Co.'s No. 1 P. F. Coulter, 150 ft. from S line, 4,174 ft. from W line of 100-ac. tract, Miller League No. 2.
Drlg. shale 4,315 ft.

Allied Minerals, Inc.'s No. 1 E. C. Farmer, James Scott League, 750 ft. SE of NW line and 150 ft. SW of NE line of Gulf Prod. Co.'s E. C. Farmer 50-ac. tract.
Drlg. hard shale and lime 2,698 ft.

Allied Minerals, Inc.'s No. 1 J. R. Farmer, 150 ft. out of most southerly 50-ac. tract, James Scott Sur. (workover).
Drlg. sand and shale 4,337 ft.; cored oil sand 4,333-37 ft.

Irwin Larsen et al's No. 1 J. R. Farmer, 100 ft. NW and 100 ft. SW from E cor. of 125-acre lease, James Scott Sur.
Location.

THOMPSON—FORT BEND COUNTY

Gulf Prod. Co.'s No. 9 Gubels, 450 ft. N, 475 ft. W of SE cor. of lease, Samuel Kennedy League.
Drlg. sand and boulders 2,426 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 41 Moore, 2,372 ft. S along W line from NW cor. of James Frazier Sur., and 2,164 ft. at R/A.
Drlg. shale 4,009 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 42 Cade, N. Fitzsimmons Sur., half way between Nos. 24 and 28 and 150 ft. E at right angles.
Rig up.

Yount Lee Oil Co.'s No. 28 Smith.
Drlg. shale 4,310 ft.

Yount Lee Oil Co.'s No. 1 Mace Stewart, Martin Dunman Sur.
Drlg. shale 4,710 ft.

BATSON—HARDIN COUNTY

John A. Deering et al's No. 1 Hooks, Willis Donoho Sur., S extension test.
Coring sandy shale 4,917 ft.; showing oil and gas.

ARRIOLA—HARDIN COUNTY

Houston Oil Co.'s No. 4-X Arriola fee, 400 ft. E of No. 2-X.
Coring 3,625 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 5 R. Jordit, 60 ft. W, 495 ft. S of NE cor. of Jordit tract.
T.D. 1,329 ft.; sand 1,216-29 ft.; set screen; bailing and getting ready to put on pump.

Mines Bros.' No. 1 Coswell.
Swabbing; T.D. 3,323 ft.

SOUR LAKE—HARDIN COUNTY

Alpha Pet. Co.'s No. 2 Weiss, E flank of dome.
T.D. 5,665 ft.; P.B. to 5,100 ft. to sidetrack.

Sun Oil Co.'s No. 2 Bernard Corp., 150 ft. from N and W lines of Lot 11, H.T.&B. Sur., Sec. 69.
Drlg. shale 6,811 ft.

Texas Co.'s No. 313 fee, 150 ft. S and 250 ft. E of No. 305 fee.
Cmtd. 10-in. csg. at 645 ft.; coring sand 1,330 ft.

GOOSE CREEK—HARRIS COUNTY

Kerring's No. 1 Williams, 130 ft. from SE cor. and 55 ft. NE of Hybush's No. 3, in W. Scott upper league.
Cellar.

Humble O. & R. Co.'s No. 80 Simms-Smith, Scott Lower League, 1,000 ft. E of the most westerly W line, and 300 ft. N of the most northerly S line.
T.D. 6,703 ft.

PIERCE JUNCTION—HARRIS COUNTY

A. & P. Prod. Co.'s No. 8 Whitehead, 150 ft. S of No. 5; 50 ft. from E line of lease, J. Hamilton Sur.
Drlg. 3,100 ft.

Gulf Prod. Co.'s No. 10 H. C. Cain, 399 ft. S and 290 ft. E of NW cor. of lease and 217 ft. N of No. 9, J. Hamilton Sur No. 879 (workover).
Drlg. shale 5,916 ft.; (corrected).

Rio Bravo Oil Co.'s No. 27-A Settegast, 377 ft. S, 553 ft. W of NE cor. of Settegast "A" tract, James Hamilton Sur.
Moving in rig.

Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor. "A" lease, J. A. Kopman Sur.
T.D. 4,486 ft.; (corrected); cut and pulled liner.

MYKAWA—HARRIS COUNTY

Danciger Oil & Ref. Co.'s No. 2 Minnetex, 150 ft. of N line and 85.9 ft. of E line of lease, Lot 253, Wm. Lovett Sur.
7-in. csg. 4,812 ft.; prepare to drill plugs.

West Prod. Co.'s No. 1 Lobit, C of Lot 17, Erin Gardens Subd., F. J. Rothaas Sur.
Drlg. shale 5,800 ft.

TOMBALL—HARRIS COUNTY

Amerada Pet. Corp.'s No. 2 Metzler, 466 ft. out of NW cor., Joseph House Sur.
Drlg. sand 5,595 ft.

Amerada Pet. Corp.'s No. 3 Fitz-Rudel, 466 ft. from E line, 500 ft. from S line of 80-ac. lease, Joseph House Sur.
Drlg. shale 3,965 ft.

Humble Oil & Ref. Co.'s No. 5-B Hope, 1,900 ft. from S line and 466 ft. from W line of "B" lease, A. Senchall Sur., Abst. 723.
Location.

Humble O. & R. Co.'s No. 2 Koba, 1,061 ft. S from N line, 623 ft. E of W line of 105-ac. tract, J. M. Hooper Sur.
Cmtd. csg. 5,565 ft.

Texas Co.'s No. 2 Albert Ziegler, 466 ft. E and 466 ft. N of SW cor. of lease, Wm. Hurd Sur.
Cmtd. 10-in. csg. at 945 ft.

KITTRELL-HOUSTON AND WALKER COUNTIES

Boone Bros.' No. 1-A Texas Ling Leaf Co., 330 ft. from N and W lines of Texas Long Leaf Lbr. Co.'s 379-acre tract, Geo. Keilman Sur.
Drlg. 2,110 ft.

Crown Central Pet. Corp.'s No. 1 Texas Long Leaf Lbr. Co. and Thompson Bros., 150 ft. from W line, 150 ft. from N line of 40-ac. tract in J. S. Estheridge Sur., Abst. 399.
Location.

Humble O. & R. Co.'s No. 2 Shaw, 330 ft. from SE line of lease and 660 ft. SW of No. 1 Charles McEllis Sur.
P.B. to 1,137 ft.; cmtd. csg.

Humble O. & R. Co.'s No. 1 Texas Long Leaf Lbr. Co., 330 ft. from SW line and 330 ft. from SE line of Texas Long Leaf Lbr. Co., 696-ac. tract, C. C. McEllis Sur.
T.D. 2,939 ft.; P.B. to 1,176 ft.; drlg. shale 3,458 ft.

Humble O. & R. Co.'s No. 2 Texas Long Leaf Lbr. Co., 330 ft. SW of NE line, 660 ft. SE of No. 3, Chas. McEllis Sur., Abst. 332.
Location.

Humble O. & R. Co.'s No. 3 Texas Long Leaf Lbr. Co., 130 ft. SE of NW line, 330 ft. SW of NE line, and 660 ft. NW of No. 2, Chas. McEllis Sur.
Location.

Trinity Dev. Co.'s No. 1 G. A. Knox, 1,000 ft. from SE line and 500 ft. from SW line of Wm. Prissick Sur.
No report.

VANDERBILT—JACKSON COUNTY

Imperator Oil Co.'s No. 1 Dutton, S C of Lot No. 11, Blk. 35, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Musquiz Sur.
Rigged up and S.D.

Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50-ac. of Miller 100-ac. tract in Ray Musquiz Sur.
Rig up.

BIG HILL—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 1-A Pipkin, 2,640 ft. S and 2,050 ft. W of NE cor. of survey.
Cmtd. surface csg. 1,000 ft.; prepare to drill ahead.

PANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 15 Thomas, 200 ft. W of Gulf's No. 7 Burrell.
Drlg. sand rock 2,447 ft.

CLEVELAND—LIBERTY COUNTY

Gulf Prod. Co.'s No. 1 [illegible] McDonald, 2,796 ft. N and 185 ft. [illegible] of most southern SE cor. of Tom Devers Sur., Abst. 170, W offset to No. 6-C Kirby.
Moving in material.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 14 Moores Bluff, 1,675 ft. S, 10 deg. 3 min. E of No. 10.
Drlg. shale and lime 4,495 ft.

General Crude Oil Co.'s No. 9 Davis, 1,300 ft. each way from S and E lines of lease in D. Kokernut Sur.
Drlg. shale 5,460 ft.

General Crude Oil Co.'s No. 1 W. D. Kay, Malcom Duncan Sur., 1,537 ft. along N line from NE cor., 560 ft. S at R/A.
T.D. 1,325 ft.; running 13⅜-in. csg.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 3 Crow & Jacoba, 300 ft. each way out of SW cor. of survey, H.&T.C. Sur., A 253.
Drlg. gumbo 2,500 ft.

BULL—LIBERTY COUNTY

Gulf Prod. Co.'s No. 12 W. L. Thomas, 1,650 ft. N and 150 ft. E of SE cor. of 300-ac. tract, Jessie Devore Sur.
Drlg. shale 4,430 ft.

G. R. Brown and S. F. Bashara's No. 1 David Hannah, Jesse Devore league, 100 ft. S line, 150 ft. E line, 43-ac. Gulf tract.
Derrick.

BUCKEYE—MATAGORDA COUNTY

United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 393 ft. E line of lease.
Swbd. S.W. and oil 7,381 ft.

United North & South Dev. Co.'s No. 1 Fiedner, 1,310 ft. SE No. 1 Stoddard and 150 ft. W of right of way S.T.L.&B.M.Ry. Sur.
T.D. 7,910 ft.; swbng.; P.B. to 7,900 ft. after testing S.W.

United North & South Dev. Co.'s No. 1 Unit No. 58, 350 ft. N and 300 ft. W of SE cor. of Unit No. 58.
P.B. to 7,900 ft. after testing salt water.

MARKHAM—MATAGORDA COUNTY

Hawkins Oil Co.'s No. 1 Hawks fee, 1,350 ft. from N line and 1,650 ft. from E line of 20-ac. lease.
T.D. 600 ft.; derrick down.

Powers Prod. Co.'s No. 4 Myers, in line with wells Nos. 1 and 2, being 250 ft. E of No. 2.
Derrick down.

CONROE—MONTGOMERY COUNTY

George W. Strake's No. 2 Schaffe, 300 ft. from E line, 467 ft. from S line, C. B. Stewart Sur.
Waiting on cmt. to set.

ORANGE—ORANGE COUNTY

Trio Oil Co.'s No. 1 D. S. Comier, 60 ft. W of E line and 30 ft. S of N line of 6.83-ac. tract in W. M. Dyson Sur.
Prepare to spud.

PORT NECHES—ORANGE COUNTY

Port Neches Pet. Corp. et al's No. 1 W. E. Organ, 450 ft. from NE line and 150 ft. from NW line of A. Schramm Sur., S of Port Neches Field.
Location.

Texas Co.'s No. 6 Kuhn, 150 ft. E, 150 ft. N of SE cor. of Mary Hall Sur.
Cmtd. 16-in. csg.; drlg. hard sand 2,262 ft.

Texas Co.'s No. 8 Kuhn, 1,320 ft. N and 250 ft. E of SE cor. of Mary E. Hall Sur. No. 2 in T. J. Notgrass Sur.
Drlg. shale and lime 6,925 ft.

Texas Co.'s No. 9 Kuhn, 990 ft. N and W of SE cor. of Mary E. Hall Sur. No. 2
Drlg. shale 6,912 ft.

LIVINGSTON—POLK COUNTY

T. D. Humph. 'es' No. 1 J. C. Whitforth Block H.
Derrick.

Sun Oil Co.'s No. 1 Pratt, A. Viesca Sur. 330 ft. N line and 330 ft. E line of lease
Comp.; I.P. 17 bbls. per day.

B. M. York et al's No. 1 Kingsbury County Holding Corp., 750 ft. SE of J. Z. Werby et al's No. 1 Dick and Failing.
10¾-in. csg. at 510 ft.; drlg. 1,497 ft.

GRETA—REFUGIO COUNTY

Atlantic and Stanolind's No. 7-G O'Brien.
Derrick.

Hewitt & Daugherty's No. 13 Lambert.
Rig up.

Humble Oil & Ref. Co.'s No. 9 Fannie Heard. 933 ft. E of No. 7, 1,180 ft. S of No. 3.
Drlg. sand 4,400 ft.

United Prod. Co.'s No. 13 M. F. Lambert, C of N½ of Blk. 15 of the M. F. Lambert Subd.
Rigging up.

United Prod. Co.'s No. 14 M. F. Lambert, C of S½ of Blk. 6, of M. F. Lambert Subd.
Rigging up.

United Prod. Co.'s No. 15 M. F. Lambert, C of S½ of Blk. 15 of M. F. Lambert Subd.
Rigging up.

United Prod. Co.'s No. 10 M. F. Lambert, Charles Hardwick Sur., 466 ft. from S line, 506 ft. from E or W line of Blk. 17
T.D. 3,502 ft.; I.P. 80 bbls. per day; comp.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 1 Johnson, center of Blk. 63; (workover).
Perforated csg. 5,160-75 ft.; set screen; T.D. 5,190 ft.; putting on gas lift.

Houston Oil Co.'s No. 17 W. J. Heard, 660 ft. SE of No. 14 W. J. J. Heard.
Drilled plugs 962 ft.

Houston Oil Co.'s No. 17 Rooke, 600 ft. SW of No. 16 Rooke.
Spudded.

Humble O. & R. Co.'s No. 15 J. F. B. Heard.
Drlg. shale 4,330 ft.

United Prod. Corp.'s No. 6 Power, center of Blk. 83, townsite.
P.B. to 5,179 ft.; abd.

United Prod. Co.'s No. 9 J. A. Lambert, 933 ft. N of NW cor. of W. Heard tract and 150 ft. W of tract line, L. M. Rogers Sur.
T.D. 6,095 ft.; drilled plugs; perforated csg. 6,075-95 ft.; set screen and liner.

COLETO CREEK—VICTORIA COUNTY

Rupert Cox's No. 1 Antone Trybil, R. Manchola Sur.
Derrick.

Albert Plummer's No. 2 Terrell, 695 ft. from NW line, 330 ft. NE line of 57-ac. tract.

Manchola Sur.
Coring 4,400 ft.
Albert Plummer's No. 1 Zimmer, 330 ft. NE and SE lines of lease in Manchola Sur.
Drlg. 5,300 ft.

McFADDIN-O'CONNOR DISTRICTS—VICTORIA AND REFUGIO COUNTIES

Humble O. & R. Co.'s No. 17 O'Connor, 933 ft. SW of No. 15, Keating Sur.
Derrick.
Humble Oil & Ref. Co.'s No. 2 McFaddin C. O. Edwards Sur.
Drlg. shale 5,568 ft.
Texas Co.'s No. 2 McFaddin, 9,150 ft. S and 900 ft. at R/A out of NW cor. of C. M. B. Hoyt Sur.
Washing to bottom; T.D. 6,230 ft.
Texas Co.'s No. 9 McFaddin.
Location.

SAN FELIPE—WALLER COUNTY

DeArman Bros.' No. 1 Smith, 150 ft. from SW line, 150 ft. from SE line of 30-ac. tract, John McFarland Sur.
Cmtd. 10¾-in. csg. 515 ft.; drlg. shale 2,010 ft.
Seaport Oil Co.'s No. 1 J. W. Avery, 330 ft. from E line, 330 ft. from N line of NE cor. of 29-ac. tract, John McFarland Sur.
Drlg. sand and boulders 280 ft.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 11 Janner.
Cmtd. 7-in. csg. at 1,220 ft.; T.D. 1,270 ft.

LOUISE—WHARTON COUNTY

Pure Oil Co.'s No. 1 John Macha, 315 ft. from NW line and from SE line of F. Walnut Sur., and 467 ft. from NE line of 101.53-ac. lease, M.&C. Sur. No. 25.
Location.
Pure Oil Co.'s No. 1 G. F. Wharton Est., 1,497 ft. from SW line and 318 ft. from SE line of F. Walnut Sur., Abst. A-35.
Location.
Pure Oil Co.'s No. 2 Garrett, 990 ft. from NW and 330 ft. from NE of S cor. Sec. 28, T. W. Heard Sur.
Coring shale 5,073 ft.
Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 160 acres.
T.D. 5,100 ft. in sidetracked hole; washing to bottom.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Brownie Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 60 ft. S of NE cor. of E½ of SE Sec. 18-12s-12w
Swabbed S.W. and S.D.; T.D. 6,398 ft.
Shell Pet. Corp.'s No. 2 State.
T.D. 6,427 ft.; prepare to make D.S. test.
Shell Pet. Corp.'s No. 20 Watkins, 1,611 ft. S and 216 ft. W of NE cor. Sec. 18-2s-12w.
Drlg. sticky shale 2,532 ft.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Superior Oil Prod. Co.'s No. 2 Arceneaux, 1,968 ft. S and 1,708 ft. W of NE cor. of Sec. 33-8s-3e.
Drlg. sand and shale 5,867 ft.
Superior Oil Prod. Co.'s No. 1 Herbert, 2,-695 ft. S and 2,058 ft. E of NW cor. Sec. 35-8s-3e.
Derrick.
Superior Oil Prod. Co.'s No. 5 Larcade, 1,-665 ft. S and 483 ft. E of NW cor. Sec. 35-8s-3e.
Location.
Superior Oil Prod. Co.'s No. 2 Comeaux, 1,-576 ft. S and 467 ft. W of NE cor. Sec 34-8s-3e.
Drlg. hard sand 8,105 ft.
Superior Oil Prod. Co.'s No. 3 Iseringhauser, 1,317 ft. E, 330 ft. N of SW cor. Sec. 27.
Derrick.
Superior Oil Prod. Co.'s No. 1 Malancon, 375 ft. S and 63 ft. E of NW cor. SW Sec. 34-8s-3e.
Drlg. sandy shale 8,731 ft.
Superior Oil Co.'s No. 2 Larcade, 502 ft. N and 1,197 ft. E. SW cor. Sec. 26-8s-3e.
9⅝-in. csg. 8,041 ft.; T.D. 8,066 ft.
Superior Oil Co.'s No. 4 Larcade, 658 ft. S and 2,292 ft. E from NW cor. of Sec. 35-8s-3e.
Derrick.
Superior Oil Prod. Cor.'s No. 1 Lucien Lavergne, 596 ft. E and 330 ft. N of SW cor. of Sec. 27-8s-3e.
T.D. 8,736 ft.; P.B. 7,000 ft.; crooked hole.
Superior Oil Prod. Co.'s No. 1 Moise Lavergne, 349.7 ft. W and 98 ft. N of SE cor. of Sec. 28-8s-3e.
Derrick.
Superior Oil Prod. Co.'s No. 1 Trahan, 1,-393 ft. N, 543 ft. W of SE cor. Sec. 27.
Reaming to set csg.; T.D. 7,849 ft.
Superior Oil Prod. Co.'s No. 2 Hermandes, 329 ft. from S line, 669 ft. W of NE cor. NW Sec. 34-8s-3e.
Drlg. sand and shale 5,969 ft.
Superior Oil Prod. Co.'s No. 2 Iseringhauser, 659 ft. from W line, 330 ft. from N line of 31.86-ac. tract, Sec. 35-8s-3e.
7-in. csg. 8,642 ft.; T.D. 8,664 ft.
Superior Oil Prod. Co.'s No. 1 L. Johnson, 1,623 ft. N and 762 ft. E of SW cor. NE Sec. 34-8s-3e.
Cmtd. 7-in. csg. 8,627 ft.; I.P. 417 bbls.; 5/64-in. csg.; 19/64-in. csg. on tubing; tubing pressure 2,700 lbs.; csg. pressure 2,400 lbs.
Superior Oil Prod. Co.'s No. 3 Larcade, 542 ft. E and 500 ft. N. SW cor. Sec. 26-8s-3e.
9⅝-in. 7,830 ft.; T.D. 7,846 ft.

BAY JUNOP—TERREBONNE PARISH

Texas Co.'s No. 5-B State, 2,202 ft. N and 944 ft. E of SW cor. of Sec. 23-21s-14e.
Abd.

CAMERON MEADOWS—CAMERON PAR.

Burton-Sutton's No. 1 School Land.
T.D. 4,530 ft.; P.B. to 3,480 ft.; no report.
Burton-Sutton Oil Co.'s No. 4 School Land. 2,891 ft. W and 150 N of SE cor. of Sec. 16-4s-13w.
Derrick.
Texas Co.'s No. 1 Miami Corp.
Drlg. sticky shale 7,606 ft.

EDGERLY—CALCASIEU PARISH

Edgerly Oil Co.'s No. 2 Bright-Penn, 300 ft. S and 150 ft. W of NE cor. Sec. 28-9s-11w.
Drlg. sand 3,426 ft.
Emerson Oil Co.'s No. 1 Bright-Penn.
Drlg. 3,765 ft.
Emerson Oil Co.'s No. 2 Yount Lee, 300 ft. S, 150 ft. W of NW cor. NE cor. SW Sec. 28-9s-8w.
Location.

STARKS—CALCASIEU PARISH

Gulf Prod. Co.'s No. 36 Lutcher-Moore, 1,-466 ft. S and 1,816 ft. E of NW cor. Sec. 19-9s-12w.
Drlg. sand 2,759 ft.

DOG LAKE—TERREBONNE PARISH

Texas Co.'s No. 11 State, 150 ft. N and 1,-474 ft. W, SE cor. Sec. 31-21s-16e.
Building derrick.
Texas Co.'s No. 15 State, 2,402 ft. N and 1,368 ft. W, SE cor. Sec. 31-21s-16e.
Drlg. sandy shale and lime 3,616 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. W 1,787 ft. S line of lease, Sec. 34-11s-1w.
Fishing 2,379 ft.

HACKBERRY—CAMERON PARISH

Gulf Prod. Co.'s No. 16 Irwin, 770 ft. from N line, 800 ft. from W line, SE cor. Sec. 12-12w-10s.
Rig up.
Texas Co.'s No. 13-B State, 400 ft. N of NE cor. of lease, Sec. 13-12s-10w.
Cmtd. csg. 2,979 ft.
Texas Co.'s No. 14 State, 500 ft. SE of No. 13, Sec. 13-12s-10w.
Location.
Union Sulphur Co.'s No. 1 Barbee est., 1,720 ft. N line, 330 ft. E of SW cor. Sec. 13-12s-10w
Drlg. sandy shale 5,562 ft.
Union Sulphur Co.'s No. 9 Humble, 300 ft. E and slightly N of No. 1 well, or 330 ft. N and 270 ft. E of the SW cor. of Sec. 12-12s-10w.
Drlg. hard sand and lime 5,619 ft.
Union Sulphur Co.'s No. 4 Humble, 710 ft. N and 330 ft. W of SE cor. Sec. 11-12s-10w.
Drlg. sandy lime 4,052 ft.
Yount Yee Oil Co.'s No. 1-A Gulf Land, 2,000 ft. S and 50 ft. E of the NW cor. of Sec. 22-12-10.
Rig up.
Yount Lee Oil Co.'s No. 4 Carter, 160 ft. S. 305 ft. W of NE cor. of 30-ac. lease. Sec. 22-12s-10w.
Rig up.
Yount Lee Oil Co.'s No. 2-A Gulf Land. 1,100 ft. S and 50 ft. E of the NW cor. of Sec. 21-12-10.
Rig up.
Yount Lee Oil Co.'s No. 15-A Gulf Land, 1,160 ft. S and 715 ft. W of the NE cor. of the SW of Section 16-12-10.
Drlg. sand rock 3,602 ft.

NEW IBERIA—IBERIA PARISH

I. Delcambre's No. 1 Viatar, 150 ft. E, 150 ft. S and 150 ft. W of SE cor. of tract, Sec. 41-12s-5e.
Fishing 245 ft.
Harrison & Abercrombie's No. 2 Schwing, beginning at E cor. of Sec. 24-12s-8w, thence southwesterly along section line 3,054 ft., thence NW at R/A 1,121 ft.
Drlg. sand 40 ft.
Y. D. Spell's No. 2 Sabiater, 1,200 ft. N and 28 ft. W of E line, Sec. 54-12s-7e, 150 ft. N of discovery well.
Drlg. salt 3,480 ft.; (corrected).

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 10 Walt, 330 ft. N and E of SW cor. of lease.
Drlg. shale 5,983 ft.
Magnolia Pet. Co.'s No. 3 Willett, 335 ft. from S line, 990 ft. from W line of NW Sec. 7-9s-6w.
T.D. 6,970 ft.; I.P. 1,530 bbls. per day.
Shell Pet. Corp.'s No. 5 Stratford, 1,094 ft. S, 330 ft. E of NW cor. of Sec. 18.
Waiting on cmt. to set 6,909 ft.
Shell Pet. Corp.'s No. 10 Hyde.
Drlg. 345 ft.
Shell Pet. Corp.'s No. 3 Tuten, 1,159 ft. W and 330 ft. from S of NE cor. SE Sec. 13-9s-6w.
Coring sand 6,124 ft.

JENNINGS—ACADIA PARISH

Port City Oil Co.'s No. 14 Jennings Haywood, 150 ft. N and 25 ft. W of No. 13. Sidetracking at 1,590 ft.
Yount Lee Oil Co.'s No. 14 Housierre-Latrielle, 260 ft. N of No. 13, Sec. 47-9s-2w.
Drlg. anhydrite 6,027 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 11 L.L.&E., Sec 18-21s-29e.
T.D. 3,693 ft.; sidetracked at 2,668 ft.; T.D. 3,693 ft.; sidetracked; drlg. hard lime 2,788 ft.
Texas Co.'s No. 12 L.L.&E.
Drlg. wtr. sand 3,810 ft.

LAKE HERMITAGE—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 2 LaFourche Basin Levee Dist.
Drlg. shale 5,079 ft.

LAKE PELTO—TERREBONNE PARISH

Whitstone O. & G. Co.'s No. 1 Buckley, 300 ft. S and E of NW cor. SW SW Sec. 15 19s-16e.
T.D. 3,053 ft.; tested gas on a D.S. test; prepare to set csg.

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 23 Cockrell-Moran, 650 ft. N and 21 deg. 30 min. E of No. 2 in Twp. 20s-26e.
Drlg. 3,531 ft.

LEESVILLE—LAFOURCHE PARISH

Emerald Pet. Co.'s No. 7 State of Louisiana.
Derrick.
Gulf Prod. Co.'s No. 10 Bernard, 1,833 ft. E, 958 ft. S of NW cor. Sec. 26-21s-22e.
Derrick.
Gulf Prod. Co.'s No. 3 Community, 50 ft. W and 1,300 ft. E of NW cor. Sec. 26-21s-22e.
Derrick.
Gulf Prod. Co.'s No. 8 Bernard, 568 ft. E along S line of 5.08-ac. tract from SW cor. and 446 ft. N at right angles, Sec. 26-21s-22e.
T.D. 4,903 ft.; P.B. 773 ft.; waiting on cmt. to set.
Emerald Pet. Co.'s No. 8 State of La., 455 ft. N of No. 1.
P.B. to 2,225 ft.
Emerald Pet. Co.'s No. 10 State, west bank, 300 ft. S of well No. 1.
Location.
Emerald Pet. Co.'s No. 11 State, east bank, 227 ft. N of well No. 1.
Location.
Emerald Pet. Co.'s No. 12 State, east bank, 250 ft. S of well No. 1.
Location.
Frank L. Hill's No. 1 Bernard, 1,422 ft. N and 808 ft. E of SW cor. Sec. 26-21s-22e.
S.D. 3,670 ft.
Leesville Oil & Gas Co.'s No. 1 Southern Louisiana Canal Navigation Co., 35 ft. W of Bank of Bayou, 15 ft. N of S bank, Sec. 26-21s-22e.
Washing to bottom 4,189 ft.
Texas Co.'s No. 21 L.L.&E., Sec. 26-21s-22e.
Drlg. sand 3,704 ft.
Texas Co.'s No. 20 L.L.&E.. Sec. 27-21s-22e.
Comp.; I.P. 320 bbls. per day; T.D. 3,-737 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 13 Bordages, 966 ft. W and 93 ft. N of SE cor. N¼ NE Sec. 8-10s-19w
Coring 6,566 ft.
Union Sulphur Co.'s No. 1 Moss (W.O.).
P.B. from 3,360 ft. to 3,194 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Prod. Co.'s No. 8 Wilson Cochran, 568 ft. E along S line of L. Bernard 5.08-acre tract from SW cor. of Sur., 466 ft. N at right angles to said line, being 400 ft. N of line drawn through No. 1 and No. 3, Sec. 26-22s-12e.
Drlg. sand and shale 2,056 ft.

ROANOKE—JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 1 Taylor, 440 ft. E and 440 ft. S of NW cor. SW Sec. 12-9s-4w.
Location.
Humble O. & R. Co.'s No. 1 Jarnigan, 440 ft. S and E, NW cor. SW Sec. 12-9s-4w.
Location.
Humble O. & R. Co.'s No. 1 R. C. Jarnegan, 440 ft. S, 440 ft. E of the NW cor. SE Sec. 12-9s-4w.
Rig up.
Humble O. & R. Co.'s No. 2 Devilbiss, 1,-399 ft. W, 466 ft. S of NE cor. Sec. 14-9s-4w.
R.U. to D.D.; T.D. 3,746 ft.
Humble O. & R. Co.'s No. 1-B Devilbiss.
Comp.; T.D. 7,918 ft.; I.P. 29 bbls.; ⅝-in. choke.
Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E, 660 ft. S, NW cor. Sec. 12-9s-4w.
Drlg. shale 8,898 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 26 United Land.
Drlg. sticky shale 5,326 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 790 fee, 929 ft. S and 802 ft. W of C Sec. 29-9s-10w. (W.O.); P.B. to 3,790 ft.
Union Sulphur Co.'s No. 795 fee.
Swbng.; T.D. 5,530 ft.
Union Sulphur's No. 2 Uldrick, 500 ft. N of No. 1.
Drlg. sand and gravel 617 ft.
Union Sulphur's No. 803 fee.
Drlg. rock 1,768 ft.
Union Sulphur Co.'s No. 2 Kelly, 1,345 ft. S, 198 ft. W of the NE cor. of Sec. 30-9s-10w.
Drlg. sand rock 5,562 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount Lee fee, 800 ft. S of No. 11, in line with Nos. 9 and 10, Sec. 12-12-8w.
S.D. 7,439 ft.
Union Sulphur Co.'s No. 800 fee.
Drlg. shale and boulders 1,625 ft.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 15 F. H. Gray, 342 ft. N and 338 ft. E of SW cor. Sec. 32-10s-12w.
Drlg. sand 1,784 ft.
Vinton Oil Co.'s No. 1 J. G. Gray, 330 ft. from N line and 545 ft. from E line of SE NE Sec. 4-11s-12w.
Drlg. shale 3,730 ft.
Wilson Broach's No. 7 Wilson (W.O.), Sec. 33-10s-12w.
Fishing 2,388 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 9 Wilburn, 800 ft. E of No. 7.
Reaming; T.D. 7,046 ft.

MISCELLANEOUS WILDCATS

TEXAS

ANGELINA COUNTY

Thayer et al's No. 1 Dearmond, J. T. Peavy Sur., 2¼ miles SE of Zavalla.
Hard lime 1,915 ft.; T.D.

AUSTIN COUNTY

J. S. Wheeless et al's No. 1 Lewis Wittenburg, 330 ft. S and 1,100 ft. from W line of 202.5-ac. tract, Sec. 179, H.&T.C. Sur.
Rig up.

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bachelder Sur.
Drlg. shale 7,663 ft.
Harrison & Abercrombie's No. 1 Bernard River Land, 1,000 ft. out of SE cor. of Lot 23.
Cored sand 3,629-51 ft.; to run csg.
C.&R.G. Drlg. Co.'s No. 1 Frank Trukse, 200 ft. from S and 1,000 ft. from E lines of 75-ac. tract, Sec. 7, H.T.&B.R.R. Sur.
Drlg. shale 7,856 ft.
Holt et al's No. 1 Griffith, J. B. Bailey Sur
T.D. 4,200 ft.; waiting orders.
McCarthy Oil Co.'s No. 1 National Life Insurance Co., 300 ft. S of N line of Blk. 3 and 466 ft. E of W line of E½ of H. Austin League No. 4.
S.D. 6,536 ft.
Stanolind Oil & Gas Co.'s No. 1 J. W. Surface, 466 ft. N and 400 ft. W of most easterly SE cor. of 75.9-acre tract, A.C.H. &B. Sur., Abst. 462.
Cmtd. surface csg. 1,418 ft.
Turnbull & Irwin's No. 1 Sutherland & Buck, 330 ft. from N and S lines and 150 ft. from W line of 40-ac. tract, A. Robinson Sur.
Cmtd. 16-in. csg. 800 ft.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat Realty Co., C of NE of Sec. 6, Blk. C.
Rotating 7⅝-in. csg. at 6,887 ft.
Steen Drlg. Co.'s No. 1 Stansel, 500 ft. along N line from NW cor., thence 350 ft. at R/A of 371.2-ac. tract, A. E. Parza Sur
Drlg. shale 6,145 ft.

CHAMBERS COUNTY

Sun Oil Co.'s No. 1 Hamilton 1,400 ft. from N line, 1,400 ft. from W line of survey. T.&N.O. Sur., Sec. 128.
Cmtd. 13⅜-in. csg. at 1,414 ft.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, 1,320 ft. SE of NW cor. of Sec., 2,200 ft. SW at right angles in I.&G.N. Sur.
S.D. 6,194 ft.

FORT BEND COUNTY

Benedum & Trees' No. 1 Jacob Hensler, Charles D. Sayers Sur.
S.D. 15 ft.; waiting on csg.
W. A. Shafer et al's No. 1 V. B. Bortash 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
S.D. 2,900 ft.
Vico Oil Co.'s No. 1 H. R. Darst, 5,690 ft. N of S line and 685 ft. W of E line of E. Powell Sur
Drlg. shale 3,950 ft.
Wilks et al's No. 1 Norris, 300 ft. W and 1,352 ft. S of N cor. of 525-ac. tract (6 miles S of Needville).
Rigged up and S.D.

GALVESTON COUNTY

Gilliock Pet. Co.'s No. 2 Maco Stewart, 900 ft. N and 150 ft. W of No. 1, Alex Farmer Sur.
T.D. 1,500 ft.; waiting on surface pipe; S.D.
H. E. Sedberry, trustee's No. 1 Thomas Shaw (200 acres), 150 ft. NW line, 150 ft. NE line, Lot 66, Sec. 7, Hall & Jones Galveston Island.
S.D. 53 ft.
Humble O. & R. Co.'s No. 1-B Stewart, 421 ft. S of Dickinson Bayou, 460 ft. E of B line of Blk. 16, Beatty Subd., John Sellers Sur.
Washing well; T.D. 8,025 ft.
Pure Oil Co.'s No. 1 J. W. Shelor (331.1 acres), 2,760 ft. S of Dickinson-San Leon highway and midway E and W lines of lease, B.B.B.&C. Sur.
T.D. 7,837 ft.; P.B. to 7,300 ft.; waiting on cmt. to set.

GRIMES COUNTY

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur.
Drlg. shale 1,625 ft.
Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
S.D. 1,305 ft.

HARDIN COUNTY

Kirby Pet. Co.'s No. 1 Southwest Settlement & Development Co., 1,450 ft. W of E line and 330 ft. S of N line of Sec. 226, H.&T. C. Sur.
Drlg. sticky shale 3,350 ft.

HARRIS COUNTY

American Liberty Oil Co.'s No. 1 Sweeney Sec. 17, W.C.R.R. Sur.
Drlg. shale 6,573 ft.
C. B. Bunte, Inc.'s No. 1 Laura Lacknee 6,400 ft. from E line, 194 ft. from S line of Henry Reinerman Sur., near NW city limits of Houston.
Drlg. shale 7,108 ft.
C. C. Foster and others' No. 1 H. K. Johnson, 2,000 ft. from S line and center of E and W lines of G.C.&S.F. Sur.
Drilled 25 ft. and S.D.
Farrell Bros. Co.'s No. 1 Brooks Est., 7,400 ft. S and W of NE cor. of R. & R. Vince Sur.
S.D. 412 ft.
W. U. Paul's No. 1 E. M. House, 2,300 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur.
S.D. 4,122 ft.

JEFFERSON COUNTY

Magnolia Pet. Co.'s No. 1 E. Herbert Trust, 990 ft. N, 330 ft. E of SW cor. of P. H. Bell Sur. No. 2.
Drlg. shale 8,710 ft.
Sun Oil Co.'s No. 1 H. Long, 1,500 ft. E line, 990 ft. E line of lease.
Drlg. shale and lime 7,836 ft.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.
Extension Oil Co.'s No. 1 J. A. Lovett, 330 ft. from E and 660 ft. from S line of lease. P. P. Deevers Sur.
S.D. 3,518 ft.
Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 2,550 varas from E line and 500 varas from N line of Samuel Strong Sur.
Coring shale 2,838 ft.
A. L. Maxwell's No. 1 M. D. Hinchliff, 300 ft. from E line and 1,000 ft. from N line of H.&T.C. Sur. No. 150.
Location.
Thomas et al's No. 1-A Hicks, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,047 ft.; 6⅝-in. csg. at 5,029 ft.
Turnbull and Irwin's No. 1 Lynott and Buffum, 466 ft. S and E of NW cor. of SW 100 acres of W 400 acres of 555-ac. tract James Robeson Sur.
Drlg. shale 6,490 ft.
Sunray Oil Co.'s No. 1 Ferguson, 1,000 ft.

S and 750 ft. E of SE cor. of Francis Fulcher Sur.
Moving in material.

MATAGORDA COUNTY

Continental Oil Co.'s No. 1 Robbins, J. C. Franz Sur.
T.D. 6,995 ft.; S.D. 6,625 ft.

Dr. Griffith's No. 1 fee, 3,000 ft. from N line and 3,000 ft. from W line of Wm. B Bell Sur.
Rig up and S.D.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 10-ac. tract.
S.D. 2,703 ft.

POLK COUNTY

Seward Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 1¼ mile NE of Corrigan.
S.D. 60 ft.

J. F. Anderson's No. 1 E. I. Duke (O.W.D. D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 46, P. J. Mineral Sur.
Waiting on a new mud pump; T. D. 5,304 ft.

Dick Schwab's No. 1 Lynch, 330 ft. out of NW cor. of 200-ac. tract in the George Jameson Sur.
Location.

REFUGIO COUNTY

Cecil Hagen et al's No. 1 Edith Clarkson, 1,726 ft. from N line, 3,820 ft. from E line of J. Coughlin Sur.
Location.

Dale Sneed's No. 1 Peck, 366 ft. N and W out of NW and SW of Bonnie View Subd. Pulled and reset perforated liner; swbd. some wtr.

Quintana Oil Co.'s No. 1-B O'Connor, 189 ft. E line and 2,525 ft. S line of B.B.B.&C. Sur., Abst. 96.
Abd.; T.D. 5,960 ft.

Quintana Oil Co.'s No. 3-A O'Connor, 396 ft. from SW line, 1,107 ft. from SE line of Swisher Sur.
Location.

VICTORIA COUNTY

Devonian Oil Co.'s No. 1 J. M. Fagan, Peter Teal League, Abst. 112, 9,000 ft. from N line, 466 ft. W of E line.
Drlg. 5,010 ft.

Texas Co.'s No. 1 E. B. Potthast, N 50 deg. E, 850 ft. S, 35 deg E, 850 ft. from W cor. of lease, T.&N.O.R.R. Sur., Sec. 11.
Running csg. 1,103 ft.

WALKER COUNTY

C. P. Kilgore et al's No. 1 Lamkin, 320 ft. from S line and 320 ft. from E line of Lamkin 1,000-acre tract in J. J. Holcomb Sur.
10¾-in. csg. 3,321 ft.; to drill plug.

WHARTON COUNTY

Whitehead and Rash's No. 1 C. T. and D. Kountze, 1,320 ft. from N line, 330 ft. from E line of S.A.&M.G. Sur., Sec. 1, Abst. 328.
Location.

SOUTH LOUISIANA
ACADIA PARISH

Humble O. & R. Co.'s No. 1 American Rice Mills, 660 ft. S and 1,320 ft. W from NE cor. Sec. 27-10s-1e.
Location.

ALLEN PARISH

Gumble O. & R. Co.'s No. 1 Industrial Lumber Co., 1,220 ft. W line and 2,440 ft. S line Sec. 21-3s-5w.
Drlg. shale 7,836 ft.

ASCENSION PARISH

Humble O. & R. Co.'s No. 2 S. Gumbel & Co., 500 ft. southwesterly from No. 1, 275 ft. easterly from road and approx. 475 ft. N of S line of tract, Sec. 33-10s-2e.
Derrick.

BEAUREGARD PARISH

Gulf Ref. Co.'s No. 1 Lutcher Moore, 660 ft. from S line, 760 ft. from E line, NE Sec. 35-6s-12w.
Drlg. shale 6,788 ft.

Richardson & Martin's No. 1 Southwest Lbr. Co., SW Sec. 6-5s-12w.
Location.

CALCASIEU PARISH

Fohs' No. 1 O. H. Castle, 330 ft. S and 330 ft. W of C Sec. 13-9s-8w.
Location.

Humble O. & R. Co.'s No. 1-B Industrial Lbr. Co., 466 ft. N, 1,399 ft. W of the SE cor. Sec. 27-8s-12w.
Drlg. shale 2,339 ft.

Union Sulphur Oil Co.'s No. 1 State Land, 1,940 ft. S, 2,513 ft. E of NW cor. Sec. 12-9s-8w.
Drlg. shale and lime 5,743 ft.

Wheeler Oil Co.'s No. 1 Gabbert, 1,322 ft. E and 548 ft. N of SW cor. of Sec. 28-9s-7w.
S.D. 1,420 ft.

EAST FELICIANA PARISH

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 76.
Drlg. shale 1,000 ft.

EVANGELINE PARISH

Humble O. & R. Co.'s No. 1 Haas, 1,250 ft. SE of Bayou Nezpique, 466 ft. NE of SW line of Sec. 22-4s-1w.
Drlg. shale 2,000 ft.

CAMERON PARISH

Texas Co.'s No. 10-A State, 16,855 ft. W and 3,370 ft. N of NE cor. Sec. 1-14-9w in Twp. 13s-9w.
T.D. 6,270 ft.; sidetracked 4,109 ft.; drlg. Shale and lime 5,676 ft.

Texas Co.'s No. 1 Jessen, 1,170 ft. E and 550 ft. N of C Sec. 24-14s-10w.
Rig up.

JEFFERSON DAVIS PARISH

George W. Strake's No. 1 Calcasieu Natl. Bank, 200 ft. S and E of NW cor. SE NE Sec. 12-9s-6w.
Rig up.

LAFOURCHE PARISH

Barnsdall Oil Co.'s No. 3 Harang Plantation.
Drlg. shale 5,422 ft.

R. L. Gay, trustee's No. 1 Godchaux, 1,920 ft. N and 1,746 ft. E in common cor. of Lots 34 and 36, Twp. 15s-19e.
S.D. 4,126 ft.

Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 300 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e.
Spudded and S.D.

PLAQUEMINES PARISH

Texas Co.'s No. 13 State-Garden Island Bay, Sec. 107-23s-32e.
Set 21½-in. csg. at 102 ft.; broken lime 1,730 ft.

Venice Corp.'s No. 1 Burras.
Set 10-in. csg. at 1,533 ft.

RAPIDES PARISH

J. B. Evers' No. 1 G. Wettermark, 540 ft. S and 520 ft. E, NW cor. NE SW Sec. 15-6n-2e.
Location.

C. D. Loe's No. 1 Barrett, 330 ft. NW of SE line and 880 ft. NE of SW line of Sec. 40-5n-1w.
Rig up and S.D.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 536 ft. N, 1,191 ft. W of SE cor. Sec. 135-14s-14e.
Drlg. lime 5,339 ft.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec. 29-8s-6e (workover).
S.D. 5,043 ft.

H. J. Weir's No. 1 Declouet, Sec. 108-8s-5e, near Lafayette Parish line and 3 miles N of Anse La Bute Field.
Drlg. 1,640 ft.

ST. MARTIN PARISH

Texas Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec. 17-8s-7.
Drlg. shale 9,404 ft.

VERMILLION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line, NE cor. Sec. 32-11s-3e.
T.D. 4,056 ft.; fishing.

La.-Ark. Wildcats

(Continued from Page 55)

Drlg. 2,010 ft.

Zeiger & Bacon's No. 1 Crossett, 400 ft. N, 300 ft. W, SE cor. Sec. 41-23-6e.
T.A. 3,111 ft.

NATCHITOCHES PARISH

Benedum & Trees' No. 1 Carrier Est., 300 ft. N and W, SE cor. Sec. 6-8-7.
Drlg. 3,286 ft.

Clyde Crichton's No. 1 Friedman Est., 406 ft. N, 428 ft. E, SW cor. Sec. 52-7-6.
S.D. for wtr., 1,088 ft.

Jack Lent's No. 1 Brown Lbr. Co., 400 ft. S, 300 ft. E, NW cor. NE SW Sec. 27-9-13.
Killing S.W. flow to deepen.

Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,022 ft.

Roy A. Raines et al's No. 1 Raines est., 330 ft. N and E, SW cor. Sec. 8-9-10.
S.D. for water 2,606 ft.

OUACHITA PARISH

Hamilton Gas Co.'s No. 1 Parker, 557 ft. S, 473 ft. W, NE cor. Sec. 2-19-3e.
Drlg. 140 ft.

Maury Drlg. Co.'s No. 4 Frierson, 660 ft. S and W, NE cor. Sec. 30-19-4e.
Comp.; 1,261,000 ft. gas, 2,179 ft.

James A. Noe's No. 1 Wall, 184 ft. S, 1,872 ft. E of C Sec. 25-19-3e.
Drlg. 100 ft.

United Public Service Co.'s No. 2 fee, 460 ft. S and W, NE cor. Sec. 26-19-3e.
Comp.; 2,000,000 ft. gas, 2,150 ft.

RAPIDES PARISH

Evans & Collingsworth's No. 1 Hickman, 330 ft. S and E, NW cor. Sec. 40-4-1e.
Dry and abd. 2,130 ft.

C. D. Loe, trustee's No. 1 Baird Est., SE cor. Sec. 40.5n-1w.
Rigging up.

RED RIVER PARISH

Louis L. Glass' No. 1 Dickson, 400 ft. S and W, NE cor. SE Sec. 32-12-3.
S.D. 1,030 ft.

Circle W and Windsor Oil Co.'s No. 1 Jenkins Est., 660 ft. E and E, NE cor. NW Sec. 4-12-11.
Comp.; flowing 40 bbls., 2,729 ft.

C. M. Cope et al's No. 1 Thomas, 330 ft. S and E, C Sec. 34-13-3.
S.D.; W.O. 2,405 ft.

Windsor Oil Co.'s No. 2 Jenkins, 1,980 ft. S and E, NW cor. Sec. 14-12-11.
Drlg. 50 ft.

SABINE PARISH

H. J. Brothers et al's No. 1 Edwards, 300 ft. S. and W. NE cor. SW NW Sec. 29-9-13.
Set 6-in. 1,552 ft.

R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW Sec. 35-10-12.
Tested dry after acid; S.D.; W.O. 1,935 ft.

Erle P. Halliburton's No. 3 Burkett, 330 ft. N and W, SE cor. SW SE Sec. 9-9-13.
W.O.S.R. 2,010 ft.

Halliburton & Meadows' No. 1 Jackson, 330 ft. S and E, NW cor. NE NE Sec. 15-9-13.
Dry and abd. 1,650 ft.; old T.D. 1,998 ft.

Helena O. & G. Co.'s No. 2 Heard, 330 ft. S and E, NW cor. NW NE Sec. 16-9-13.
Set 10-in. 45 ft.; drlg. 1,512 ft.

Helena Oil & Gas Co.'s No. 1-B Graham, 330 ft. S and W NE cor. NE NW Sec. 20-9-13.
Pumping S.W. 2,000 ft.

L. D. Higgins' No. 2 Burkett, 330 ft. S and E, NW cor. NE NE Sec. 16-9-13.
W.O.S.R. 2,035 ft.

Lawson-Leavell's No. 1 Whitney Corp., 330 ft. N and E, SW cor. NE SW Sec. 5-9-13.
S.D. for wtr. 1,010 ft.

Zan Lloyd's No. 1 Henderson, 330 ft. N and W, C Sec. 29-9-13.
W.O.S.R. 2,031 ft.

Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 18-9-12.
Set 10-in. 40 ft.

TENSAS PARISH

Schumacher, tr.'s No. 1 Curry, Sec. 39-11-12e.
Arranging to deepen 3,750 ft.

UNION PARISH

Carbons Consolidated's No. 1 Lankford, 431 ft. N, 332 ft. E, SW cor. SE SE Sec. 3-21-3e.
Arranging to set 6-in. 2,100 ft.

WINN PARISH

Red River Ref. Co.'s No. 3 Tremont Lbr. Co., 320 ft. N, 521 ft. W, SE cor. Sec. 26-11-1w.
S.W. and abd. 1,379 ft.

ARKANSAS
ARKANSAS COUNTY

Grand Prairie Realty Co.'s No. 1 Fischer, 200 ft. S and E, NW cor. NE NW Sec. 6-6s-4w.
Drlg. 100 ft.

COLUMBIA COUNTY

Dudney & Woodward's No. 1 Pearce, 330 ft. S and W, NE cor. NW Sec. 7-17-20.
S.D. for wtr. 1,400 ft.

HEMPSTEAD COUNTY

Ark. Drlg. Co.'s No. 1 Jones, 1,000 ft. S, 600 ft. W, NE SE Sec. 11-14-24.
Arranging to resume drlg. 2,808 ft.

B. A. Austin's No. 1 McWilliams, 300 ft. N and W of SE cor. NW SW Sec. 19-13-23.
Drlg. 2,000 ft.

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26.
S.D. 1,992 ft.

F. W. Martin & Co.'s No. 1 Lafferty, 500 ft. N and W SE cor. NW Sec. 17-14-24.
Drlg. 3,600 ft.

LAFAYETTE COUNTY

Benedum & Trees' No. 2 Bodcaw, C SE SE NE Sec. 19-16-23.
Drlg. 3,915 ft.

Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23.
S.D. 2,910 ft.

W. H. Harvey's No. 2 Allen, Sec. 18-19-24.
Rigging up.

A. H. Tarver's No. 1 Russell, 330 ft. S and W, NE cor. NW Sec. 12-17-25.
Rigging up.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 4 Beck, SE cor. SE SW Sec. 34-15-26.
Set 10-in. 180 ft.

Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27.
S.D. 3,177 ft.

Ark. Oil, Gas & Ref. Co.'s No. 1 Beck, SW cor. NW SW Sec. 34-15-26.
1,200 ft. oil in hole at 2,920 ft.

King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 24-14-28.
S.D. 2,708 ft.

Magnolia Pet. Co.'s No. 5 Olivet, Sec. 3-16-26.
Testing 2,940 ft.

A. C. Roan's No. 1 Frost Est., 150 ft. N and W, SE cor. SE SW Sec. 8-15-26.
Rigging up.

Lee Timberlake's No. 1 Frost Est., 330 ft. N and E, SW cor. SW SE Sec. 27-15-26.
Set 10-in. 200 ft.

NEVADA COUNTY

O. F. Whittaker's No. 1 Wesley, Sec. 2-15-20.
Set 10-in. 101 ft.; drlg. 1,250 ft.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16.
S.D. 2,032 ft.

T. J. Gaughan's No. 1 Bragg, 330 ft. N and E, SW cor. NE SE.
Set 10-in. 104 ft.

J. D. Reynolds' No. 1 Guttry, 452 ft. S, 150 ft. W, NE cor. NE SW Sec. 21-15-19.
Comp.; pumping 10 bbls., 2,178 ft.

Sam M. Richardson & Co., Inc.'s No. 9 J. Goodwin, C NE SW Sec. 32-15-15.
Comp.; pumping 10 bbls., 2,038 ft.

UNION COUNTY

Janian Oil Corp.'s No. 1 Perdue, 150 ft. N, 650 ft. E, SW cor. NW SE Sec. 3-17-14.
Moving in rig.

Mrs. R. K. Jones et al's No. 1 J. Davis, 330 ft. N and W, SE cor. NW NW Sec. 23-16-14.
Fishing for csg. 2,764 ft.

Lion Oil Ref. Co.'s No. 10-A Flenniken, 200 ft. N, 630 ft. E, C Sec. 10-16-15.
Recmtd. 5 3/16-in. csg. 2,406 ft.

McCrea-lenn Oil Co.'s No. 1 Union Saw Mill Co., 330 ft. N and W, SE cor. NE NW Sec. 3-18-13.
Comp.; pumping 25 bbls., 3,577 ft.

Reuter Oil Co., Inc.'s No. 1 J. L. Kinard, 330 ft. S and E, NW cor. SE NW Sec. 32-18-14.
S.D.; W.O. 2,189 ft.

Short & Hayes' No. 1 Taylor, 450 ft. E, 330 ft. S, NW cor. NW SE Sec. 10-17-14.
Drlg. 3,196 ft.

Tubal Pet. Co.'s No. 1 Gaddy, 340 ft. N and E, SW cor. SE NW Sec. 14-17-14.
S.D.; W.O. 2,416 ft.

WOODRUFF COUNTY

L. P. Lively's No. 1 Perkins, 330 ft. N, 360 ft. E, SW cor. SE SE Sec. 5-5n-2w.
Rigging up.

J. N. Watkins et al's No. 1 Upshaw, 330 ft. N and E, SW cor. NW SW Sec. 17-5n-2w.
Rigging up.

MISSISSIPPI
AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

BOLIVER COUNTY

White & Jones' No. 1 Ballou, SE SE NW Sec. 17-24n-7w.
Rigging up.

GREENE COUNTY

United Gas Pub. Service Co.'s No. 1 Greene County School Land, W½ W½ Sec. 16-1n-5w.
Drlg. 2,250 ft.

HARRISON COUNTY

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
Drlg. 575 ft.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 520 ft. W, 200 ft. S, C Sec. 24-7n-13w.
T.A. 3,900 ft.

LAUDERDALE COUNTY

Bob Dalton's No. 1 Bounds, Sec. 34-7n-15e.
Set 10-in. 540 ft.; S.D.; W.O.

MONROE COUNTY

P. J. McAlpine's No. 1 Frank Rye, Sec. 15-15s-17w.
Drlg. 1,925 ft.

P. J. McAlpine's No. 1 Crook, 1,090 ft. S, 90 ft. W, NE cor. Sec. 15-13s-18w.
C.O. hole; T.D. 720 ft.

SIMPSON COUNTY

Berry Corp.'s No. 2 R. T. Berry, Sec. 33-2n-4e.
Set 7-in. 2,048 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 24-3n-9e.
Partly rigged up and S.D.

WARREN COUNTY

Orbet Drlg. Co.'s No. 1 R. L. Parker, 300 ft. E. CWL Sec. 14-14-1e.
Dry and abd. 3,252 ft.

WASHINGTON COUNTY

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-8w.
Set 10-in. 300 ft. and S.D.

WINSTON COUNTY

Jack Vale et al's No. 1 Moody, 713 ft. N, 667 ft. E, SW cor. NW SW Sec. 3-13n-14e.
S.D. 20 ft.

La.-Ark. Proven Fields

NORTH LOUISIANA
CADDO—BLANCHARD

C. W. Brown et al's No. 1 Sharf, 1,650 ft. S, 350 ft. W, NE cor. Sec. 10-18-16.
Drlg. 840 ft.

Louana-Pyramid's No. 1-A Wheeler, 660 ft. S and W of C Sec. 4-18-16.
Rigging up.

M. Segal's No. 2 Sharf, 330 ft. S and W, NE cor. NW NW Sec. 11-18-16.
Drlg. 740 ft.

CADDO—HOSSTON

Shoreline Oil Corp.'s No. 44 Crystal, 330 ft. S and E of C Sec. 13-21-16.
Rigging up.

Shoreline Oil Corp.'s No. 3 Harrell, 350 ft. S, 330 ft. E, NW cor. SE SW Sec. 2-21-16.
Comp.; pumping 12 bbls., 1,032 ft.

SABINE PARISH—ZWOLLE

Alexander & Cane's No. 1 Fogman, SE cor N½ SW NE Sec. 18-7-11.
Arranging set csg. 2,353 ft.

Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11.
S.D. for wtr. 2,120 ft.

Crichton & Co.'s No. 1 Williams, 660 ft. N and E, SW cor. SW SE Sec. 6-7-11.
Set 6-in. 2,345 ft.

Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12.
S.D. 1,100 ft.

Foster & Hartman's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. NE Sec. 10-7-13.
S.D.; W.O. 2,696 ft.

E. D. Holcomb's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. SE Sec. 7-7-11.
Pulling liner 2,530 ft.

H. C. Maulding's No. 1 Davis, 350 ft. N and W, SE cor. NE NE Sec. 2-7-11.
Rigging up.

H. C. Maulding's No. 2 DeLatin, 330 ft. S and E, NW cor. NE SE Sec. 2-7-11.
S.D. 2,250 ft.

Pelican Nat. Gas Co.'s No. 26 La. Long Leaf, 1,320 ft. N, 2,540 ft. E, SW cor. Sec. 9 7-11.
Used acid 2,796 ft.

Pelican Nat. Gas Co.'s No. 27 La. Long Leaf, 100 ft. S and E, NW cor. SE SE Sec. 8-7-11.
Rigging up.

K. C. Peterson et al's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. SW NW Sec. 2-7-9.
Rigging up.

Texas Co.'s No. 1 H. B. Wilson, 330 ft. S and W NE cor. SE SE Sec. 31-8-11.
Set 6-in. 3,290 ft.; drlg. 3,489 ft.

Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr Co., Sec. 3-3-12.
Arranging to resume drlg. at 2,210 ft.

EAST TEXAS (BORDER COUNTIES)
CASS COUNTY

R. K. Kamon et al's No. 1 Savage, Mary Patterson Sur.
S.D. 4,016 ft.

HARRISON COUNTY

W. T. Boyd's No. 1 Rudd, John McWilliams Sur.
Rigging up.

R. C. Payne et al's No. 1 Lowery, E. D Spain Sur.
P.B. to 3,524 ft.

PANOLA COUNTY

R. H. Davis' No. 1 Wooten Est., Winnie Mann Sur.
S.D. 2,092 ft.

Givens & Holloway's No. 1 Wooten est., Winnie Mann Sur.
S.D. 2,153 ft.

R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Rigged up and S.D.

Fred Stovall Drlg. Co.'s No. 1 H. B. Ivey, P. Martin H.R.S.
S.D. for csg. 1,980 ft.

SHELBY COUNTY

Bush Oil Int.'s No. 1 Windham, W. M Blackburn Sur.
Abd. 3,366 ft.

Cliff Stovall's No. 1 Pickering Lbr. Co., C H. Patterson Sur.
S.D. 690 ft.

Turner & Neil's No. 1 Pickering Lbr. Co., P. W. Harvey Sur.
S.D. 250 ft.

ALABAMA
HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
S.D. 2,410 ft.

LAMAR COUNTY

DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w.
S.D. 4,182 ft.

NEW AND IMPROVED EQUIPMENT

Westinghouse Introduces New Weatherproof Motor

The Westinghouse Co. announces a new splashproof, dripproof and weatherproof motor for use indoors or outdoors or for any applications where drippings or

splashing liquids are encountered. This motor is entirely new in that it is not an adaptation of an open machine with enclosures applied around the frame, but it has been built with the motor frame and end brackets of solid castings for this special class of service. The case iron being of thick cross section and inherently resistant to rust and corrosion makes this motor highly resistant to the sour gases encountered around a refinery or the chemicals which may be encountered in a chemical plant, paper mills, etc. Even the conduit box is made of cast iron so that there are no exposed sheet-steel parts to be attacked by corrosion.

A baffle-plate cast integral with the inner side of the motor bracket prevents splashing liquids from reaching the motor windings. In fact, this motor is so well protected that the manufacturers say it may be used outdoors the year round without additional protection. These motors are offered with either ball or sealed-sleeve bearings.

Rod Elevator Is Built for Greater Strength, Safety

The new B-M-W Neilson Type C sucker-rod elevators put on the market by the Bradford Motor Works, Bradford, Pa., are designed for strength, ease of operation and safety. Strength is assured by use of molybdenum steel bodies and forged steel bails. Ease of operation is gained by convenient location of operating latches and replaceable feature of both spring and plates. Safety is increased by two latches, either of which will hold the rod alone.

The heavy-duty elevator takes all rod sizes from five-eighths inch to 1 inch, also three-fourths inch pipe. Equipped with 1-inch diameter bail 16 inches long, and 18-inch bail can be supplied. Strong enough to break a seven-eighths inch sucker rod. Recommended for any depth well.

The light model takes five-eighths inch and three-fourths inch rods. Equipped with seven-eighths inch diameter bails 12½ inches long, and 16-inch bails can be supplied. Strong enough to break a three-fourths inch sucker rod. Recommended up to 3,000-foot wells.

Rear levels are standard equipment, but either elevator can be furnished with both front and rear levers. Interchangeable plates of hardened steel are a feature, making it possible to handle any size or make of rod in one elevator. The plates carry the rods, thus causing no wear on the elevator body.

Among the Equipment Houses

The Pittsburgh Equitable Meter Co., Pittsburgh, Pa., announces that W. R. McLaughlin, measurement engineer, has joined its sales organization.

—

G. J. Goodson, who has been representing the Bradford Motor Works, Bradford, Pa., in the southeastern part of the Mid-Continent, has been made manager of the Tulsa office.

—

The Combustion Engineering Co., Inc., has divided the southern territory into two districts. The southeastern district will extend from Richmond, Va., to Florida, with headquarters in Charlotte, N. C., in charge of T. C. Heyward. The southwestern district will extend south of the Kentucky-Tennessee border and west of Atlanta to the Mississippi River. It will be under the Chattanooga district office with L. C. Haller as district manager.

—

Under the direction of H. S. Colby, general sales manager, a western division of the Combustion Engineering Co.'s sales organization has been formed, comprising the Chicago, Detroit, Indianapolis, St. Louis, Kansas City, Houston, Tulsa, Minneapolis and Denver offices. Roger W. Andrews, formerly assistant to the president of the Blaw-Knox Co., will be in charge.

—

V. G. Vaughan, well-known electrical engineer, has been made manager of the Spencer Thermostat Co., Attleboro, Mass.

—

H. H. Rank, formerly with the International Supply Co. and the D. & B. Pump & Supply Co., is now connected with the Houston Oil Field Material Co., Lake Charles, La.

—

The Terry Steam Turbine Co., Hartford, Conn., has appointed Henry D. Bevan as manager of its Philadelphia district office in the Otis Building, Sixteenth and Sansom Streets. Mr. Bevan was formerly assistant manager of the New York office.

Cutler-Hammer Introducing New Type of Safety Switch

A new line of explosion-proof safety switches for use in Class I, Group D, hazardous locations is announced by Cutler-Hammer, Inc., Milwaukee, Wis. This

new line includes both single-throw (Bulletin 4,104) and double-throw (Bulletin 4,124) types, in standard sizes up to 200 amperes capacity. The switch is of heavy industrial-duty type A construction, with outside operating handle, mounted in a heavy weather-proof, semisteel cast enclosure, complying with requirements of the National Electrical Code. A precision machined flange of required width, between the case and cover, assures proper cooling of any flame which might occur from an explosion within the case, so that outside gases will not ignite. Corrosion-resisting bolts hold the cover firmly in place.

Two pipe-threaded conduit holes are provided in the bottom of the case and pads at the side and top of the case allow for drilling other holes if needed. Provisions are made for padlocking the handle in either on or off positions.

Applications for these explosion-proof switches include such locations as oil refineries, bulk oil stations, filling stations, gas plants, spray painting plants, chemical works, etc. Descriptive bulletins are sent on request.

New 75-Ampere Arc Welder Put on Market by Lincoln

Demands for an arc welder which can be used on thin sheets, plates and shapes by garages, metal-working shops and industrial plants are met by a new small motor-generator unit announced by the Lincoln Electric Co., Cleveland, Ohio. This new welder can be supplied for use on any alternating current power line including 110-volt circuit.

This new welder, known as the SA 75, will deliver as low as 20 amperes at the arc without the use of auxiliary devices. As a result of this, the makers say, a new field of application for arc welding is opened up. Repair shops will find many advantages. It provides the low uniform welding current needed for fender and body repairs and at the same time it can be used in repairing bumpers, frames and other heavier materials. Its advantages will be particularly appreciated in the repair of cracked water jackets or cylinder heads.

As no preheating is necessary in making arc welded repairs, damaged cylinder heads can be repaired without removing the engine from the car.

FACILITATES TELEMETERING

An electronic relay, by transforming minute electrical currents into useful forces, plays an important part in a new telemetering system developed by Bailey Meter Co., Cleveland, Ohio, for measuring pressure, temperature, liquid level, and other factors at distant locations. The electronic relay operated Galvatron receiving element is mounted in a moisture-proof pressed steel casing and records as many as four factors on one 12-inch diameter circular chart. The transmitting element consists principally of a variable resistance unit which is operated by the metering device. In the case of a float operated transmitter for liquid level, a float, by means of a perforated metal tape, operates a sprocket which moves the rheostat. When necessary, an electric bulb is provided to prevent frost from forming on the resistance unit.

Oilwell Streamline Block Affords Additional Safety

Outstanding performance, minimum upkeep and utmost convenience are said to be features of the new Oilwell 80 and 66-inch streamline traveling blocks recently introduced by the Oil Well Supply Co. The manufacturer states that these trav-

eling blocks can be run without danger as fast as drilling crews can handle the drill pipe. Speed with safety is provided for by the streamlined construction, properly balanced design (low center of gravity) and the roller bearing equipped sheaves.

All projecting parts and sharp corners which might catch in the derrick or fingerboard are eliminated. The side plates are streamlined steel castings with recesses for the heads and nuts of the pins and the guard bolts which otherwise would project from the surfaces of the plates. The hood or upper clevis is a streamlined steel casting fixed in a vertical position and it joins the upper ends of the side plates without any projections or sharp corners. The upper parts of the sheave guards are cast integral with the hood.

The balanced design with a low center or gravity maintains the block in a vertical position even when run at the highest speeds without any load. The roller bearings reduce the frictional resistance and make possible a high rate of acceleration.

Both the 80 and the 66-inch blocks are said to be strong enough to handle safely any loads now encountered in drilling the deepest wells. The 80-inch block is especially rugged and is designed for handling with safety much greater loads than it would be subjected to in drilling wells to depths exceeding the present records.

Capacity for the heaviest loads is provided by the sturdy construction which combines high quality materials with proper design of parts subjected to strain. The roller bearings are extra large and are recommended for heavy loads and high speeds. The center pin is of exceptionally large diameter, 8-inch for the 80-inch block and 6-inch for the 66-inch block. The lower clevis, of the link and crossbar type, consists of steel forgings and large diameter pins. The sheaves are manganese steel castings and all other parts are made of forged or cast steel.

The upkeep of the new traveling blocks is said to be negligible. Provision is made for convenient and efficient Alemite lubrication of the heavy-duty roller bearings through individual drilled passages in the center pin so that the block can be used for years of hard service without any bearing replacements. The bearings have removable hardened steel inner and outer races so that no wear takes place on the center pin or the bores of the sheaves.

The large diameter manganese steel sheaves are statically balanced and the grooves are accurately ground to A.P.I. specifications.

It is not necessary to remove any part of the guards for stringing one of the blocks. The lower clevis can be swung approximately 90 degrees from the vertical, thus forming a support for standing the block upright on the derrick floor. This provides convenience in stringing.

"Comfo-Respirator" Offers Increased Filter Capacity

The Mine Safety Appliance Co., Pittsburgh, Pa., announces a new, patented development in dust-respiratory equipment, the MSA Comfo-Respirator, which recently completed its final tests in the company's research laboratories.

Unique in design, and comfortable to wear, the Comfo-Respirator features greatly increased filter capacity and a

special filter material to effect new low breathing resistance and high efficiency against fine dust, without sacrificing lightness.

In the development of the new respirator and throughout the tests special effort has been made to combine greater dust stoppage with simplicity of construction, comfort and working freedom, in order to overcome the characteristic objection of workmen to the wearing of dust-respiratory equipment.

ALL-METAL VACUUM SWITCH

A new small vacuum switch, made almost entirely of steel and designed to take advantage of the absence of an arc when breaking a circuit in a high vacuum, has been announced by the General Electric Co. Although this new vacuum switch is only about three-quarters of an inch in diameter and 1½ inches long, and can be operated by a fraction of an ounce of pressure, it is capable of interrupting 5 horsepower 30 times a second. Designated as the Type FA-6 vacuum switch, this new device is rated at 10 amperes, 250 volts DC or 440 volts AC—or 5 amperes at 500 volts DC.

PUMP REPAIRS MADE QUICKLY

The oxy-acetylene bronze-welding process is offered by the Linde Air Products Co., 205 East Forty-second Street, New York, as a swift and effective method of repairing refinery pumps, reducing shutdown time and heavy replacement costs. As a case in point, high pressure applied in error caused a serious fracture in the head of an 8-inch centrifugal pump. Repair seemed impossible, and the refinery was preparing to buy a whole new pump, as a separate head could not be procured, but this expense of $350 was saved when bronze-welding was tried.

The Koalt Engineering Co., 533 Mayo Building, Tulsa, has been incorporated with M. B. Crowe president, Max J. Masel vice president and Hughey Baker secretary and treasurer. This firm represents the Key Boiler Equipment Co. and the Timken Steel & Tube Co.

Notes About Trade Literature

The October number of the Water Tower, published by the Chicago Bridge & Iron Works and Horton Steel Works, Ltd., Chicago, contains many articles of interest to refiners. Worthy of special note is one about the St. Joseph, Mich., terminal of the Theisen-Clemens Co., where the gasoline tanks are equipped with Wiggins breather roofs.

—

A bulletin obtainable from the Synthane Corp., Oaks, Pa., explains the advantages of Synthane-Risonite explosives containers, for use in shooting oil, gas or water wells with nitroglycerin or other high explosives.

—

"Service Entrance Cables, 'Aeic' and Armored Types," and "Asbestos Insulated Magnet Wire" are the titles of two new bulletins prepared by the General Cable Corp., 420 Lexington Avenue, New York.

—

The Master Separator & Valve Co., 914 Bankers Building, Los Angeles, Calif., is sending to those who ask for it a catalog covering Master gas and oil separators; steam scrubbers; gas, air and oil scrubbers; plug cock valves; flow bean plug cocks; turret flow beans, and float valves.

—

The Lincoln Shield Arc welder is the subject of a bulletin issued by the Lincoln Electric Co., Cleveland, Ohio.

—

A bulletin obtainable from the Euclid Road Machinery Co., Cleveland, Ohio, is entitled "Putting It Over With the New Euclid Rear-Dump Trac-Truk."

—

Among articles in the October issue of the Case Eagle, published by the J. I. Case Co., Racine, Wis., is one telling of oil field uses of Case tractors.

"Transporting Inflammable Liquids With Safety" is the subject of a 16-page illustrated booklet sent on request by Shand & Jurs Co., Berkeley, Calif.

—

A request sent to the Grant Oil Tool Co., 2042 East Vernon Avenue, Los Angeles, Calif., brings a bulletin describing the Grant bailer and the Grant perforation cleaner.

—

The Henry Vogt Machine Co., Tenth and Ormsby Streets, Louisville, Ky., has ready for distribution a new series of boiler bulletins covering its three-drum and four-drum curved tube boilers. Each carries illustrations of representative installations.

—

The first issue of the Euclid Pioneer, published by the Euclid Road Machinery Co., Cleveland, Ohio, "in the interest of economical earth-moving and material-handling," contains interesting pictures, with text, of the company's "Trac-Truks."

—

A rotogravure tabloid, obtainable from the Republic Steel Corp., Massillon, Ohio, contains 12 pages of pictures of the company's exhibits at the Century of Progress Exposition, Chicago.

—

The General Cable Corp., 420 Lexington, Avenue, New York, sends on request a copy of an eight-page bulletin describing and illustrating the company's Romex nonmetallic sheathed cable.

—

The October number of the Valve Record, published by the Crane Co., Chicago, contains among its many interesting articles, one by William P. Christensen on the Iraq pipe line which spans the Syrian Desert and is now in use.

International Harvester Announces New Line of Trucks

The new streamlined International trucks include models ranging from one-half to 5 tons in capacity. The forerunner of this new line was the half-ton Model C-1, and the larger models carry the same distinctive features and attractive finish.

The Model C-55, built to carry a total of 14,000 pounds, including body, cab, and equipment, and rated at 3½-4½ tons, has a maximum allowable gross weight of 21,500 pounds. The Model C-60, 4-5 tons, has the same maximum allowable gross weight.

These models are alike with the exception of the rear axle. The Model C-55 has a spiral bevel drive-gear axle, while the Model C-60 has a double-reduction axle with herringbone gears for the first reduction. Both rear axles are of the full-floating type. These models are built in 140, 156, 170, 190 and 210-inch wheel bases.

The power plant of the Models C-55 and C-60 is the six-cylinder International Model FBB-3, also of the valve-in-head type, with replaceable cylinders, valve-seat inserts and other important features. This power plant—bore, 3¾ inches; stroke, 4½ inches; displacement, 298.2 cubic inches—develops 90.4 brake horsepower at 2,800 r.p.m., its governed speed. Its peak torque is 213.5 pound-feet at 800 r.p.m.

Men Well Known in the Equipment Field

George W. (Jack) Walton has been made manager of the machinery division in the Mid-Continent of the Emsco Der-

GEORGE W. WALTON

rick & Equipment Co., E. M. Smith, president, announces.

Mr. Walton attended the Missouri School of Mines and has been active in the supply business for the past 14 years, being connected in the Mid-Continent with the National Supply Co. and with Wilson-Snyder. He was also in the London, England, office of the National Supply Co. For the past eight years he has been connected with Emsco's Mid-Continent sales department. Mr. Walton's headquarters are in the Continental Building, Dallas, Tex.

DuPrene Resists Action of Destructive Hydrocarbons

The rapidly growing use of propane and butane as fuels for bus and truck engines, especially in the Far West, has made it necessary to develop a flexible connection for handling these light petroleum products either as gases or, more commonly, as liquids under pressure. A material was required that would not deteriorate in contact with propane and butane and through which these substances would not diffuse rapidly with resultant large losses. This problem has been solved, according to E. I. duPont DeNemours & Co., Wilmington, Del., by the development of hose in which "DuPrene" is used. It is said to be unaffected by these hydrocarbons and to be only about one-fifth as permeable to them as other materials.

Aside from crude oil and refined petroleum products, many other liquids that attack rubber can be handled without trouble in flexible hose with a DuPrene lining. DuPrene has been successfully used in contact with a variety of synthetic organic liquids, vegetable oils and animal oils. For example, paint-spray hose with an inner tube of a DuPrene compound successfully resists the action of linseed oil, turpentine and Duco thinner.

DuPrene also has found important uses in oil well drilling accessories such as packers, pistons, swab cups and sealing plugs.

Another industrial use for these compounds is in packing. An asbestos sheet packing made with a DuPrene binder is more resistant to oils and to high temperatures.

The Sotco washover hydraulic wall hook is the subject of a bulletin mailed on request by the Specialty Oil Tool Co., Brea, Calif.

Among Gulf Coast Drilling Contractors

(Continued from Page 49)

ning in the East Texas Field on its own properties.

Edwards Drilling Co. is rigging up No. 1 Chetimanchas, Charenton Dome, near Franklin, St. Mary Parish, Louisiana, which will be carried from 6,504 feet, where it was previously bottomed, to 8,500 feet unless commercial production is found. Edwards did the previous drilling on this hole, which is for John R. Black and others. Edwards is also proceeding on its well at Dickinson for the Pure Oil Co., having plugged back from 7,500 feet to 7,300 feet to straighten hole. This well is in Galveston County.

C. & R. G. Drilling Co. is drilling at 7,856 feet on its No. 1 Frank Truska, Brazoria County, for the Big Creek Oil Co. Formations are said to be running very favorably, and all breaks are being cored. The company's rig near Dickinson, Galveston County, for the Gillock Petroleum Co., is still shut down waiting for surface casing.

Frank Long is drilling a well in the Sam Fordyce Field, Hidalgo County, for Alford and others.

Carl B. King has a new location to drill for the Petroleum Marketing Co. in East Texas. Ed Warren, formerly district superintendent of the Continental Oil Co. in West Texas, has joined Mr. King's organization, and will have charge of tools in West Texas and New Mexico. Mr. Warren, who is an engineering graduate from the University of the State of Washington, has had more than 12 years of active experience in the Panhandle and West Texas areas, including the Big Lake district, where he supervised considerable deep drilling.

George Echols is moving in rig to drill a well for Texas Co. on the G. W. Southerland ranch in Duval County. Another rig is moving into the Bruni Field, Webb County, to drill a well for Sun Oil Co. Wells drilling are No. 9 Fannie Heard, Greta Field, for Humble Oil & Refining Co.; No. 1 Gonzales-Clark, Starr County, for Sun Oil Co., a deep test; and a well for Continental Oil Co. on the Driscoll ranch, Duval County.

Rutherford Drilling Co. made a drill stem test on No. 2 Cobb; Van Vleck, Matagorda County, for Skelly Oil Co. in which 200 feet of mud and oil was recovered in 10 minutes at 150 pounds pressure, through top and bottom chokes. No. 1 Cobb, discovery well, is a wet gasser showing 2,700 pounds pressure.

Gohlson Drilling Co. has resumed drilling on its cable tool hole in Bandera County, approximately 80 miles northwest of San Antonio, which has been shut down for several months for lack of water.

LEGAL

Call for Bids To Purchase Royalty Oil Accruing to the United States from the Salt Creek, Wyoming, Oil Field. Pursuant to the provisions of Section 36 of the act approved February 25, 1920 (41 Stat. 437), sealed proposals, in duplicate, will be received in the office of the Secretary of the Interior, Washington, D. C., on or before noon December 10, 1934, from responsible bidders for the purchase for a period beginning January 1, 1935, of all royalty oil accruing to the United States from Government lands in the Salt Creek, Wyoming, oil field. The Government royalty oil from the Salt Creek field amounts to about 13.6 per cent of the production of the field and for the calendar year 1933 amounted to 1,001,387 barrels, for 1933 to 885,035 barrels, for the first eight months of 1934 to 546,743 barrels. The average gravity in all years was in the range from 36.0 to 36.9 degrees A.P.I. Additional information may be obtained from the Director, Geological Survey, Department of the Interior, Washington, D. C., or the Supervisor, U. S. Geological Survey, Casper, Wyoming. Bids are invited on three separate items as follows: Item 1. Royalty oil for a period of one year beginning January 1, 1935, and ending December 31, 1935. Item 2. Royalty oil for a period of two years beginning January 1, 1935, and ending December 31, 1936. Item 3. Royalty oil for a period of three years beginning January 1, 1935, and ending December 31, 1937. Bids must be in the following exact form: "For the period beginning January 1, 1935, and ending December 31, 193—(name of bidder), offers —— cents per barrel above the highest field price for oil of equal or lower gravity in Oklahoma and Kansas, and/or in Wyoming, whichever is the higher, as published or offered on any basis of volume measurement by any responsible recognized purchaser for crude oil in quantity not less than 2,000 barrels a day." Delivery of royalty oil will be made in the field to the successful bidder or for his account without cost to the Government. Payments for the royalty oil are to be made through the office of the Supervisor, U. S. Geological Survey, Federal Building, Casper, Wyoming, to the order of the Commissioner of the General Land Office on or before the last day of each calendar month following the calendar month in which delivery is made. The volume of royalty oil will be determined by such rule of volume measurement as may be applicable to production of the Salt Creek field under regulation or order of the Secretary of the Interior; and it is proposed that effective January 1, 1935, the volume of production shall be determined by tank measurement as based on 100 per cent capacity tables and shall be computed in terms of barrels of clean oil of 42 U. S. gallons of 231 cubic inches, in conformity with departmental order of August 6, 1932. Each bidder must submit with his bid a bond in the sum of $1,000 or a certified check payable to the order of the Secretary of the Interior in the sum of $1,000 as a guarantee that he will, if successful, promptly execute a satisfactory contract and furnish a bond in the sum of $200,000, conditioned upon full and complete compliance with the terms of the contract. The Secretary of the Interior may accept the offer of the highest bidder and/or bidders and reserves the right to reject all bids whenever within his judgment the interest of the United States demands. Storage facilities are available on Naval Petroleum Reserve No. 3, Wyoming (Teapot), for approximately 1,500,000 barrels of oil. Information in regard thereto may be obtained from the Secretary of the Navy. Sealed bids are to be submitted to the Secretary, Department of the Interior, Washington, D. C., the envelope to be marked plainly "Bid on Salt Creek royalty oil." No bid received after the time herein fixed for submitting bids will be considered. (Signed) T. A. Walters, Acting Secretary of the Interior. October 31, 1934.

REORGANIZE ASSOCIATION

CALGARY, Alberta, Nov. 3.—The Oil and Gas Association of Alberta, dormant for some time, will be reorganized at a dinner to be held early this month.

Kansas Fields

(Continued from Page 59)

Akerson, NE SE NE Section 27-19-2w. J. Allison and others were rigging up No. 1 Chindberg, SW SW SE Section 19-18-2w.

Russell County

Empire Oil & Refining Co.'s No. 1 J. Krug, SE SW SW Section 13-15-14w, Russell County, pumped 430 bbls. in 24 hours from Siliceous lime at 3,354-58 feet.

Empire Oil & Refining Co. completed No. 1 Mai, NW NW SW Section 24-15-14w. It made a potential production of 328 bbls. from Siliceous lime at 3,364-70 feet.

Signal Oil & Gas Co. completed No. 2 Taylor, C E half E half SE Section 26-15-13w, which had made a potential production of 35 bbls. of oil and 35 bbls. of water in 24 hours from Siliceous lime at 3,368-86 feet, acidized.

Aylward and others were moving in rig for No. 1 Mills, NW NW NE Section 4-14-15w. Hartman & Blair made a location for No. 1 Gurney, SE SE NW Section 23-14-14w.

Central Petroleum Co.'s No. 1 Dortland C, NE NE NW Section 4-14-15w, was acidized in Oswald lime at 3,028-37 feet and pumped 360 bbls. in 24 hours.

H. H. Blair's No. 1 Fink, SW NW SE Section 16-14-14w, pumped 192 bbls. of oil and 5½ bbls. of water in 22 hours from Oswald lime at 3,070-3,154 feet which had been acidized.

Tom Palmer completed No. 1 Killiam, NW cor. Section 27-13-14w. It produced 818 bbls. in 24 hours potential test from pay at 3,189-3,200 feet.

R. C. Tarrant made a location for No. 1 Boxberger, NE cor. Section 33-13-14w.

Stanolind Oil & Gas Co.'s No. 22 Oswald, NW SE NW Section 8-12-15w, an old well deepened from 3,154 feet, had the top of the Gorham at 3,215 feet; top of the granite at 3,220 feet and drilled to 3,245 feet. It swabbed 50 bbls. of oil and 75 bbls. of water in 24 hours.

The Texas Co.'s No. 4 Jacobs, SW NW SW Section 31-12-15w, was acidized at 2,988-3,085 feet and later pumped 15 bbls. of oil per hour.

Ellis County

Phillips Petroleum Co. completed No. 2 Horn, C NW SW Section 5-12-17w, Ellis County. It made a potential production of 128 bbls. of oil in 24 hours from Siliceous lime at 3,637-66 feet, with pay in the last 2 feet, which was acidized.

Greenwood and Elk Counties

The Texas Co. had machine in to start No. 1 Edwards, NE NW NE Section 32-24-12, Greenwood County.

Clay Petroleum Co. was spudding No. 1 Shambaugh, C NE SE Section 20-28-9, Elk County.

Ness County

The Texas Co. and Gypsy Oil Co. have rotary rig up for No. 1 Goodman, C SW SW Section 21-19-23w, Ness County.

CLASSIFIED ADVERTISING

Royalties—Production ***Royalties—Production***

A DEPENDABLE COLLECTING AGENT

A thorough understanding of the needs of lease and royalty brokers enables us to act as your collecting agent discreetly, dependably, and with the utmost speed. You are invited to talk over with our collection staff the most efficient way to handle your transactions at a minimum expense.

THE FIRST NATIONAL BANK AND TRUST COMPANY OF TULSA

Tulsa, Oklahoma

INCOME ROYALTIES
Schedules A furnished dealers.
W. E. COOK
Suite 812, Palace Bldg., Tulsa, Okla.

PRODUCING OIL ROYALTIES
Bought and Sold.
Inquiries invited from Oil Companies, Bankers, Dealers.
DAVID R. MITCHELL & CO.,
Established 1916.
20 BROAD ST. NEW YORK

Washington Representation
For Royalty Dealers

Avoid Costly Delays in Sale of Royalties by Having Your Offerings Properly Listed and Promptly Filed as Required by Securities Act.
Expert Service Continuously Informed on Latest Revisions of Regulations and New Interpretations Issued by Federal Trade Commission.

The Security and Royalty Service
28 H. L. Rust Building
Washington, D. C.
Minimum Fee Fast Service

PRODUCING OIL ROYALTIES
for dealers.
H. P. BOWEN
842 Kennedy Bldg., Tulsa, Okla.

PRODUCING and non-producing Oil Royalties, also participating Oil Units and drilling Blocks. Associated Oil Company. Key Bldg., Oklahoma City, Okla.

BROKERS — SALESMEN
Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. Complete set of Forms and Reports for filing with Securities and Exchange Commission accompanies every order. Inquiries Invited.
B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

OKLAHOMA broker desires contact with conscientious Texas broker or lawyer for purchase of high class Texas royalties for conservative investors. Credentials exchanged. Address Box G-412, The Oil and Gas Journal, Tulsa, Okla.

Income Producing Royalties
Mid-Continent Field
Harry A. George
Exchange Bank Bldg., Tulsa, Okla.

Producing Oil Royalty, listed under Federal Security Act, paying monthly income in half acres and upwards at reasonable prices. P. O. Box 35, Tulsa, Oklahoma.

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma

PRODUCING OIL ROYALTIES
EAST TEXAS — 4.16 Royalty acres Calvin Brown 100 acre fee, McCurry and Outlaw Surveys, Gregg County. 10 wells, 2 more locations. Arkansas Fuel Oil Co. operating. Sept. run check $54.70. Base Price. $1,250.
Texas Producing Oil Royalty Co.
Southwestern Life Ins. Bldg.
Dallas, Texas.

VAN POOL OIL ROYALTY
Bought — Sold
Box 38, Wall Street P.O., New York

ROYALTIES producing and nonproducing in Kansas, Oklahoma and Texas. James R. Haynes, Grantville, Kansas.

DEALERS IN ODD LOTS
EAST TEXAS AND VAN POOL
PRODUCING OIL ROYALTIES
We Buy and Sell.
E. T. MARION REAL ESTATE CO.
407 Southwestern Life Ins. Bldg.
Dallas, Texas.

PRODUCING ROYALTIES
for
DEALERS ONLY

Write for Details on $165,375.00 Registered royalty issue, which is now ready for sale to the public.

CHESTER IMES

First National Bldg.,
Oklahoma City, Okla.

WANTED Producing Royalties in Texas. Quick check-up and payoff. D. P. DEAN, W. T. Waggoner Building, Fort Worth, Texas.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood. P. O. Box 2261, Tulsa, Okla.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception,"
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

CLASSIFIED ADVERTISING

For Sale—Equipment

IMMEDIATE DELIVERY ON ALL SIZES, GRADES AND QUANTITIES OF USED LINE PIPE

We specialize on quick delivery throughout a large territory on all sizes and grades of serviceable used Line Pipe. Our material is drawn from regular fields, inactive sections and inaccessible locations throughout the entire Middle West. Regardless of where a particular size or quantity may be needed, we are usually in position to furnish what is wanted, in the quantity wanted, from one of our stocks within quick delivery distance of where it is to be used. Stocks are changing daily, making it impractical to give stock information far in advance, however, complete information may be secured by telephoning us "station to station" when the material is needed.

SIZES: 6-inch, 5-inch, 4-inch, 3-inch, 2½-inch, and 2-inch in all the grades suitable for all types of line pipe service. In some sizes, considerable quantities can be furnished in grades that are practically the same as new and good grades can be supplied in all sizes.

QUANTITIES: We can promptly furnish all sizes in quantities of a few hundred feet up to several miles. Seldom is an inquiry for any quantity received which we cannot deliver immediately from some of our stocks.

STOCK LOCATIONS: We carry moderate quantities, sufficient to take care of all ordinary needs, at practically all of our branch stores. In addition to these regular store stocking points we maintain a number of distributing pipe yards in various locations within convenient delivery distance to all active sections of the Mid-Continent, Gulf Coast and Southwest.

IN TRANSIT: Our trucks and those employed by us are on the road continually moving Line Pipe from salvage locations and inaccessible points to our stores and pipe yards. Often this material can be diverted direct to the buyer's location effecting a material saving in time and often a considerable saving in cost.

ORIGINAL LEASE LOCATIONS: We are always engaged in the work of salvaging a number of properties in various locations throughout the country and usually have large quantities of practically all sizes at these points which many times are within handy delivery distance of locations where the pipe is to be used. This material is often offered at prices which represent a considerable saving over prevailing stock prices.

PRICES: Our prices for a given size, grade and quantity are always in line with current market prices and often the most favorable obtainable anywhere. On large quantities we are in position to quote especially attractive prices.

RENTALS: Rental deals are considered and will be discussed with interested parties.

Whether we have a branch store in the vicinity of where you need Line Pipe or not, it will pay to call us on the phone for definite information regarding prices, quantities, and delivery points when you need Line Pipe. Call any Bridgeport Store or Office "Station to Station" from anywhere.

THE BRIDGEPORT MACHINE COMPANY
Wichita—Houston—Dallas—Tulsa
Oklahoma City—Pampa and other points.

For Sale—Equipment

REFINERY EQUIPMENT, PIPE AND TANKS

The latest and most modern refinery ever dismantled. Complete cracking, lub, and skimming plants. All sizes pipe, valves, and fittings. Two 325 plate, 48" Carbondale wax presses and other wax plant equipment.

20" PIPE SPECIAL, IN SERVICE 2 YEARS

40,000 feet Naylor Spiralweld Toncan steel pipe in 40 foot joints. with or without victraulic couplings, located in Oklahoma City.

FORTY 55,000 BBL. STEEL ROOF TANKS

Will sell where are or will cut down and re-erect on your grade at great saving. Complete line of tanks, any capacity.

SONKEN-GALAMBA CORPORATION
64-108 North Second Street, Kansas City, Kansas.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also, large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

FOR SALE—2⅜" OD and 2⅞" API 10 thd. P. & T. reconditioned kick-off collars for stage lift. At a bargain. I. T. I. O. Company, Bartlesville, Oklahoma.

FOR SALE—Two 40 H. P. two cycle Weber gas engines with roller bearing reverse clutches. One 110 H.P. National Transit Gas Engine.
GENERAL MACHINE & SUPPLY CO.
Wichita Falls, Texas.

KEYSTONE Driller, size 5½, equipped with new McCormick-Deering Gas Engine also tools. Price right. Stumpff & McFaull, Box 1123, Texarkana, Tex.

FOR SALE—9,000' 2" Tubing, 4⅞ Casing, 6¼ No. 2 Plain end line pipe. E. R. YOUNG PIPE CO., Neodesha, Kans.

FOR SALE: 4" 15-lb. Seamless Relegs complete for 123' Angle Iron Drilling Derrick. I. T. I. O. Company, Bartlesville, Oklahoma.

FOR SALE—25,000 ft. second-hand 4-inch, 11-lb. gas pipe, 25 cents per ft., f.o.b. Indiana point. A. B. Ayres, Newcastle, Indiana.

Equipment Wanted

WANTED—Two Pipe Wrapping Machines for stationary pipe of 9 inches to 18 inches diam. Address Box G-393, The Oil and Gas Journal, Tulsa, Okla.

RELIABLE Oil Company wants to buy direct from owner any part of five hundred tank cars—sixes, eights, tens and compartments, for cash or terms. Submit proposition and complete history. Address Box G-381, The Oil and Gas Journal, Tulsa, Okla.

DRILLING engine wanted, gas, oil or Diesel. Also extra jack shaft and reversible clutch. Moses Shylock, Chatham, Ontario.

Incorporations

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE CHARTERS—Fees small; submitted forms. Chas. G. Guyer, 901 Market Street, Wilmington, Del.

Business Opportunities

CORRESPONDENCE solicited with party having drilling outfit. E. T. Camp, Gadsden, Ala.

WANT experienced shell still operator who can raise $1,000 to unite with me to operate small unit. Can give profitable outlet. Have some money and have security, aside from plant to protect your investment. Address Box G-411, The Oil and Gas Journal, Tulsa, Okla.

CAPITAL—An experienced dependable broker will aid in financing project of merit. Amster Leonard, 316 S. Clark St., Chicago, Ill.

Classified Rates

Classified Advertising rates are 35 cents a line for the first insertion and 25 cents a line for each additional insertion, PAYABLE IN ADVANCE.

Six words usually constitute a line.

Compute white space at line rate.

Minimum of three lines accepted.

	1 time	2 times	3 times	4 times
3 lines	$1.05	$1.80	$2.55	$3.30
4 lines	1.40	2.40	3.40	4.40
5 lines	1.75	3.00	4.25	5.50
6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

To avoid delay be sure to send remittance with copy. Over payments will be refunded. One time insertions will not be run until fully paid.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Display Rates

Classified Display Advertising set in similar style to this Ad or in two-column style is as follows:

1 inch ..... 1 time $5.00
1 inch ..... 13 times 4.50
1 inch ..... 26 times 4.00
1 inch ..... 52 times 3.50

PAYABLE IN ADVANCE
MONTHLY

One-point borders and 10-point capitals are allowed; larger type not accepted.

To avoid delay be sure to send remittance with copy. Over payments will be refunded. One time insertions will not be run until fully paid.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Situations Wanted

WOMAN stenographer, engineering, refining, wants position. Address Box G-401, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED Accountant desires position with oil company. I.A.S.&O.S. of A. graduate. Neal, P.O. Box 101, Tulsa.

REFINERY ENGINEER—Young man with 2¾ years experience as refinery test engineer, 5 years engineering drafting on refinery and gasoline plant construction desires connection. Address Box G-413, The Oil and Gas Journal, Tulsa, Okla.

Help Wanted

WANTED—Graduate petroleum chemist having general refinery experience, including the manufacture of Lube Oils and Solvents. State age, education and references. Address Box G-410, The Oil and Gas Journal, Tulsa, Okla.

Financing

JOHN MORRIS, Seventh Floor, 1237 Market Street, Philadelphia, will help float small deal. No stock selling. Send full facts in first letter.

JAMES E. MILLER CO., 207½ E. Third St., Tulsa, Okla., will co-operate with responsible parties seeking aid in financing projects of higher order.

Leases—Production

ATTRACTIVE OIL PROPERTIES
Drilling blocks, Leases and Royalties. Renewed activities East from discovery well. The hot spot of new Cherokee County field. Still opportunity to get some of best holdings at reasonable prices. All deals handled open and above board. Let me have your orders. E. W. COLE, Box 262, Rusk, Texas.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

BUY LAND—2½ acres, clear deed, for $75, $5 down, $5 month, in California's next prospective oil and gas field. Well down 660 ft. now. Kimbrough, 729 San Fernando Bldg., Los Angeles, Calif.

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, N. Mex.

FOR SALE—Oil and gas leases in shallow oil territory and on well defined structures. Will furnish 500 acres, drill and case two wells for $2,000. W. P. HARLEY, Bowling Green, Ky.

LEASE on 640-acre block in Dawson County, Montana, for a well. Favorable geological report. Address Box G-390, The Oil and Gas Journal, Tulsa, Okla.

HAVE dandy working interest in sand production Seminole area, showing approximately fourteen months payout at $7,500. This includes $4,000 physical equipment. ACT QUICKLY. Write Box 501, Tulsa, Okla.

COLLEGE PARK LOTS, in fee, all royalty, under Community Lease, in line between the Oklahoma City and Edmond Fields. Attractive prices. Write for maps and information. G. E. Fisher, 518 Key Bldg., Oklahoma City, Okla.

OWNER OFFERS ½ interest in 80-acre lease and well to be drilled in Southeastern Throckmorton County, Texas, with producing oil and gas wells on three sides—backed by remarkable report of Carl G. Anderson, Geologist. To 1,800 feet there are six sands and wells come in from lower sands up to 1,000 barrels flush daily. Ideal for individual or small group, or as basis for small syndicate. Ask also for information about leases on small blocks at rare prices. Write immediately for facts and prices to
FRANK JOBB,
Cripple Creek,
Colorado.

ATTENTION BROKERS can furnish leases for resale small or large tracts, very active area, along escarpment of South Texas, and in line for big play. Reliable information and co-operation extended. P.O. Box 1946, Houston, Tex.

● The First National Bank in Dallas, through sound financing, has played a vital part in the development of the great oil area which it daily serves. In turn, the oil industry has contributed much toward making this bank the largest in the Southwest, with total resources of over a hundred million.

First National Bank
in Dallas

MEMBER FEDERAL RESERVE SYSTEM

Index to Advertisers

A

Abercrombie, J. S., Co.
Air Reduction Sales Co.
Allegheny Steel Co. 66
Allis-Chalmers Manufacturing Co.
Allsteel Products Mfg. Co., The
American Askania Corp.
American Cable Co.
American Iron & Machine Works Co.
American Meter Co. 4
American Recording Chart Co.
American Steel & Wire Co.
Auer, C. L., and W. W.
Axelson Manufacturing Co.

B

Baker Oil Tools, Inc. 6
Baroid Sales Co.
Barrett Co., The
Barret, William M., Inc. 65
Bethlehem Steel Co. 1
Boston Woven Hose & Rubber Co.
Bradford Motor Works, Inc.
Brewster Co., Inc. 49
Bridgeport Machine Co. 79
Broderick & Bascom Rope Co.
Brown Instrument Co., The
Burroughs Adding Machine Co.
Byron Jackson Co.

C

Cameron Iron Works, Inc.
Carbolite Sales Co.
Caterpillar Tractor Co.
Chain Belt Co.
Champion Machine & Forging Co., The
Chaplin-Fulton Mfg. Co., The 51
Chapman Valve Mfg. Co., The .....Inside Back Cover
Chemical Process Co., The
Chicago Bridge & Iron Works
Cities Service Oil Co.
Classified Advertising
Climax Molybdenum Co.
Continental Oil Co.
Continental Supply Co., The
Cooper-Bessemer Corp., The
Crane Co.
Crutcher, Rolfs & Cummings
Curtin, W. H., & Co.

D

Darling Valve & Mfg. Co.
Dart, E. M., Mfg. Co.
Davis Regulator Co.
Dearborn Chemical Co.
Devine, J. P., Mfg. Co., Inc.
Doheny Stone Drill Co.
Dow Chemical Co., The
Dowell Incorporated
Dresser, S. R., Mfg. Co. 21
DuPont DeNemours & Co., Inc., E. I.

E

Eagle-Picher Lead Co.
Economy Electric Lantern Co.
Edward Valve & Mfg. Co., Inc., The.
Elliott Core Drilling Co.
Emsco Derrick & Equipment Co.

F

First National Bank in Dallas 80
First National Bank & Trust Co. of Tulsa, The
Fisher Governor Co.
Fluid Packed Pump Co.
Foster Wheeler Corp.
Foxboro Co., The
Frick-Reid Supply Corp.
Frisco Lines

G

Gardner-Denver Co.
Garlock Packing Co., The
Gaso Pump & Burner Mfg. Co.
Gasoline Products Co., Inc.
Gates Rubber Co. 39
Gearench Mfg. Co.
General Electric Co.
General Motors Truck Co.
Gilbert & Barker Mfg. Co.
Goodyear Tire & Rubber Co., Inc.
Gott, H. P., Mfg. Co.
Grant Oil Tool Co.
Graver Tank & Mfg. Corp.
Greenspon's Sons, Jos., Pipe Corp.
Gulberson Corp., The
Gulf Refining Co.

H

Halliburton Oil Well Cementing Co.
Hanlon-Buchanan, Inc.
Harrisburg Pipe & Pipe Bending Co.
Hazard Wire Rope Co.
Heeter, C. M., Sons Co.
Helland Research Corporation 65
Hemphill Diesel Engineering Schools, Inc.
Hercules Motors Corporation 36
Houston Oil Field Material Co., Inc. 49
Hughes Tool Co. .....Back Cover
Humble Oil & Refining Co.
Hydril Co.

I

Illinois Steel Co.
International Harvester Co. of America
International Derrick & Equipment Co., The

J

Jarecki Manufacturing Co.
Jenkins Bros.
Jerguson Gage & Valve Co.
Johns-Manville Corp.
Jones & Laughlin Steel Corp.
Jones Co., The S. M.

K

Kellogg, M. W., Co., The
Kennedy Valve Mfg. Co., The

L

Landis Machine Co., Inc.
Lincoln Electric Co., The
Linde Air Products Co., The
Louisiana Supply Co. 49
Lucey Products Corp.
Ludlow Valve Mfg. Co., The
Lufkin Foundry & Machine Co.
Lummus Co., The
Lunkenheimer Co., The

Mc

McCord Radiator & Mfg. Co.
McEvoy, J. H., & Co. 49
McIntosh & Seymour Corp.

M

MacClatchie Manufacturing Co.
Macwhyte Co.
Magnolia Petroleum Co.
Maloney Tank Mfg. Co.
Manhattan Rubber Mfg., Division of Raybestos-Manhattan, Inc.
Martin-Decker Corp.
Mason-Neilan Regulator Co.
Mepham Corp., Geo. S.
Merco Nordstrom Valve Co.
Miller, Max B., & Co., Inc.
Mission Mfg. Co. .....Front Cover-49
Miller Sand Pump Co.
Missouri Pacific Lines
Moore, Lee C., & Co., Inc.
Murray-Brooks Hdwe. Co., Ltd. 49
Muskogee Iron Works

N

National Bank of Tulsa
National Lead Co. 3
National Supply Co., The
National Transit Pump & Machine Co.
National Tube Co.
Norvell-Wilder Supply Co. 49
Nugent & Co., Wm. W.

O

Oil Center Tool Co., Inc.
Oil Conservation Engineering Co.
Oil Well Supply Co. 14-15
Oklahoma Gas & Electric Co. 53
Oxweld Acetylene Co.

P

Pacific Pump Works
Parkersburg Rig & Reel Co., The
Parsons Co., The Ralph M. 32
Penberthy Injector Co.
Petroleum Building
Petroleum Rectifying Co. of Calif.
Pittsburgh Steel Co.
Powell Co., The Wm.
Prest-O-Lite Co.
Pure Oil Co., The

R

Reed Roller Bit Co.
Reid, Joseph, Gas Engine Co.
Rector Well Equipment Co.
Republic Rubber Co., The
Republic Steel Corp. (Upson Nut Division)
Republic Steel Corp. 18
Roebling's, John A., Sons Co.
Rubloff & Co., Arthur
Ryerson & Son, Inc., Joseph T. .....Inside Front Cover

S

Security Engineering Co.
Shell Union Oil Corp.
Sinclair Refining Co.
Smooth-On Mfg. Co. 51
South Chester Tube Co. 40
Southern Alkali Corporation 35
Sperry-Sun Well Surveying Co.

T

Taubman Supply Corp.
Taylor Forge & Pipe Works
Taylor Instrument Companies
Texas Iron Works
Thermoid Rubber Co., The 2
Timken Roller Bearing Co.
Timken Steel & Tube Co.
Trackson Co.
Tretolite Co. 23
Tube Turns, Inc.
Tulsa Camera Record Co.
Tulsa Chamber of Commerce
Tulsa Oil Thief Co.
Twin Disc Clutch Co.

U

Union Carbide & Carbon Co.
Union Carbide Sales Co.
Union Wire Rope Corp.
United States Rubber Co.
U. S. Steel Corp. Subsidiaries. 14-15
Universal Oil Products Co. 17
Utility Trailer Co.

V

Vellumoid Co., The
Vogt, Henry, Machine Co.

W

Wailes Dove-Hermiston Corp.
Walworth Co.
Warren Petroleum Co.
Waukesha Motor Co.
Well Machinery & Supply Co.
Wheatley Brothers
Williams Bros. Construction Co.
Williams, C. K., Co. of Calif., Ltd.
Williams & Co., J. H.
Williamsport Wire Rope Co.
Wilson Supply Co. 50
W. K. M. Co., Inc. 49
Wyatt Metal & Boiler Works

Y

Youngstown Sheet & Tube Co., The
Yowell Service Co., O. P.